

U.S. Department of
Homeland Security

**United States
Coast Guard**



COAST GUARD AIR OPERATIONS MANUAL



COMDTINST M3710.1F

Basic: 22 October 2007

Change 1: 25 April 2008

This Page Intentionally Left Blank



COMDTNOTE 3710

APR 25 2008

COMMANDANT NOTICE 3710

CANCELLED:

Subj: CH-1 TO COAST GUARD AIR OPERATIONS MANUAL, COMDTINST M3710.1F


1. PURPOSE. This notice publishes change one to the Coast Guard Air Operations Manual, COMDTINST M3710.1F.
2. ACTION. Area, district and sector commanders, commanding officers of air stations, commanders of maintenance and logistics commands, commander deployable operations group, commanding officers of integrated support commands, commanding officers of headquarters units, assistant commandants for directorates, Judge Advocate General and special staff elements at headquarters shall ensure compliance with the provisions of this notice. Internet release is authorized.
3. DIRECTIVES AFFECTED. None.
4. DISCUSSION. This change includes numerous administrative and procedural revisions, along with expanded policy on the use of Personal Electronic Devices (PED) on aircraft.
5. PROCEDURES. No paper distribution will be made of these changes. Official distribution will be via the Coast Guard Directive System CD-ROM. An electronic version will be located on CG Central at <http://cgcentral.uscg.mil> (select Resources>USCG Directives>Commandant Manuals) and on <http://www.uscg.mil>. Users maintaining a paper copy of COMDTINST M3710.1F should remove superseded pages and replace with CH-1 references.
6. CHANGES. Units and individuals may recommend additional changes to COMDTINST M3710.1F by writing via the chain of command to: Commandant (CG-711); U. S. Coast Guard 2100 2nd Street, SW, Room 3200; Washington, DC 20593-0001.

DISTRIBUTION – SDL No. 149

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A	3	3		2	3	3																				
B	1*	5	5	5	3	1	2	2	1	2	15	50		2	2			2			6			2		
C	30*	20			1			15			1				1	1	1								2	
D		1	1	1						1	1	*	1								1		1			
E	1																									
F																										
G																										
H																										

NON-STANDARD DISTRIBUTION: B:a CG-711 (20), CG-751 (3), CG-41 (5), CG-531 (1), CG-1131 (2); C:a Airsta Clearwater (20 Extra), Kodiak (20 Extra), Miami (15 Extra); D:l; ATG Pearl Harbor (1), ATG Pacific NW (1), ATG Atlantic (1), FTG Norfolk (1), ATG Mayport (1), OPBAT (2); CGLO March AFB (1), CGJROTC (1); D:q: 62 AW/DOTX (C130 Simulator McChord AFB, WA 984-0249 (2)

7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in the development of these changes and have been determined not to be applicable.
8. FORMS/REPORT. None.



WAYNE E. JUSTICE
Rear Admiral, U. S. Coast Guard
Assistant Commandant for Capabilities

Encl: (1) Instruction of Changes to the Coast Guard Air Operations Manual

Instructions for entering Change 1

REMOVE PAGES	INSERT PAGES
Cover	Cover
	CH-1 Letter of Promulgation
i through ii	i through ii
3-17 through 3-18	3-17 through 3-18
4-3 through 4-6	4-3 through 4-6
4-21 through 4-22	4-21 through 4-22
4-29 through 4-30	4-29 through 4-30
4-35 through 4-36	4-35 through 4-36
4-47 through 4-50	4-47 through 4-54
5-15 through 5-16	5-15 through 5-16
7-1 through 7-4	7-1 through 7-4
8-13 through 8-16	8-13 through 8-16
8-21 through 8-26	8-21 through 8-26
8-31 through 8-34	8-31 through 8-34
8-37 through 8-38	8-37 through 8-38
8-47 through 8-48	8-47 through 8-48
8-55 through 8-56	8-55 through 8-56
9-3 through 9-4	9-3 through 9-4
D-5 through D-6	D-5 through D-6
I-3 through I-4	I-3 through I-4

Ensure entry is made on the Record of Changes page of the manual.

This Page Intentionally Left Blank



COMDTINST M3710.1F

COMMANDANT INSTRUCTION M3710.1F

OCT 22 2007

Subj: COAST GUARD AIR OPERATIONS MANUAL

1. PURPOSE. This manual promulgates a revision of the Coast Guard Air Operations Manual. It prescribes policy, standards, instructions and capabilities pertinent to all phases of Coast Guard flight operations and is intended for use by operational commanders, unit commanding officers, aircrews tasked with air operations, as well as customers of Coast Guard aviation.
2. ACTION. Area, district and sector commanders, commanding officers of air stations, commanders of maintenance and logistics commands, commanding officers of integrated support commands, commanding officers of headquarters units, assistant commandants for directorates, Judge Advocate General and special staff elements at headquarters shall ensure compliance with the provisions of this Manual. Internet release is authorized.
3. DIRECTIVES AFFECTED. The Coast Guard Air Operations Manual, COMDTINST M3710.1E is cancelled.
4. MAJOR CHANGES. Major changes to the manual are summarized below, however, due to the significant revision of this manual, a careful review is recommended: addition of Aviation Special Missions (ASM), (e.g. AUV, RWAI, VI, BVI) training requirements, qualifications, and designations; explanation of OPCON/TACON/ADCON; re-write of chapter 5 to align with DHS Management Directive (appendix C); creation of a new Aviation Mission Specialist (ASM); updated National Capital region flight procedures; incorporation of aircraft configuration and control board procedures; addition of Unmanned Aircraft Systems (UAS) requirements and limitations; revision of weapons storage and safeguard procedures; and addition of new Aviation Gunner (AG) initial training, qualifications and recurrent training requirements.
5. REQUESTS FOR CHANGES. Units and individuals may recommend changes by writing via the chain of command to: Commandant (CG-711) (formerly CG-37RCA); U. S. Coast Guard 2100 2nd Street, SW, Room 3200; Washington, DC 20593-0001.
6. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in the development of this manual and have been determined not to be applicable.

DISTRIBUTION – SDL No. 146

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	
A	3	3		2	3	3																					
B	1*	5	5	5	3	1	2	2	1	2	15	50		2	2			2			6				2		
C	30*	20			1			15			1				1	1	1									2	
D		1	1	1						1	1	*	1								1		1				
E	1																										
F																											
G																											
H																											

NON-STANDARD DISTRIBUTION: B:a CG-711 (20), CG-751 (3), CG-41 (5), CG-531 (1), CG-1131 (2); C:a Airsta Clearwater (20 Extra), Kodiak (20 Extra), Miami (15 Extra); D:l; ATG Pearl Harbor (1), ATG Pacific NW (1), ATG Atlantic (1), FTG Norfolk (1), ATG Mayport (1), OPBAT (2), CGLO March ARB (1), CGJROTC (1); D:q: 62 AW/DOTX (C130 Simulator McChord AFB, WA 984-0249 (2)

7. FORMS/RECORDS. The forms called for in this manual are available in USCG Electronic Forms on the Standard Workstation or on the Internet:
<http://www.uscg.mil/ccs/cit/cim/forms1/welcom.htm> or internet:
<http://cgweb2.comdt.uscg.mil/CGFORMS/Welcoms.htm> . FAA Form 7233-1 and 7233-4 are not supported by the USCG and can be found on the FAA website at:
www.faa.gov/library/forms/ . Forms with Stock Points other than Adobe maybe obtained through the Primary Office of Responsibility (OPR).



DAVID P. PEKOSKE
Rear Admiral, U. S. Coast Guard
Assistant Commandant for Operations

This Page Intentionally Left Blank

COAST GUARD AIR OPERATIONS MANUAL

COMDTINST M3710.1F

TABLE OF CONTENTS

CHAPTER 1	OVERVIEW OF COAST GUARD AIR OPERATIONS	1 - 1
	A. Mission of Coast Guard Aviation	1 - 2
	B. Authority and Control of Flights	1 - 4
	C. Transportation	1 - 7
	D. Conduct of Flights	1 - 8
	E. Safety	1 - 10
	F. Training	1 - 15
	G. Mission Planning	1 - 17
<hr/>		
CHAPTER 2	FLIGHT AUTHORIZATION AND CLEARANCE	2 - 1
	A. Authority for the Coast Guard to Operate Aircraft	2 - 2
	B. Authorized Official Uses of Coast Guard Aircraft.	2 - 3
	C. Authority to Approve, Direct and Initiate Flights	2 - 5
	D. Personnel Authorized to Pilot Coast Guard Aircraft.	2 - 7
	E. Personnel Authorized to Command Coast Guard Aircraft.	2 - 8
	F. Flight Clearance Authority for Coast Guard Aircraft.	2 - 11
<hr/>		
CHAPTER 3	FLIGHT AND MISSION PLANNING	3 - 1
	A. Mission Planning	3 - 2
	B. Flight Planning Procedures	3 - 5
	C. Flight Planning — Aircrew	3 - 9
	D. Flight Planning — Weather	3 - 21
<hr/>		
CHAPTER 4	CONDUCT OF AIRCRAFT OPERATIONS	4 - 1
	A. Conduct of Aircraft Operations.	4 - 2
	B. Ground Operations	4 - 4
	C. Passengers	4 - 7
	D. Flight Rules	4 - 9
	E. Instrument Flight Requirements	4 - 12
	F. Avoidance and Reporting of Actual and Near Midair Collisions	4 - 14
	G. In-Flight Emergencies	4 - 15
	H. Flight Maneuvers	4 - 16
	I. Flight Violations.	4 - 22

Table of Contents, Continued

	J. Offshore Flight Operations	4 - 23
	K. Night Vision Goggles (NVGs)	4 - 27
	L. Maintenance Flights	4 - 29
	M. Ferry Flights	4 - 32
	N. Orientation Flights	4 - 33
	O. Participation of Aircraft in Flight and Static Displays	4 - 38
	P. Other Regulations and Considerations	4 - 41
	Q. Weapons	4 - 44
	R. Electronic Equipment	4 - 48
	S. Aircraft C4ISR Systems	4 - 52
<hr/>		
CHAPTER 5	TRANSPORTATION	5 - 1
	A. Overarching Principles	5 - 2
	B. Analytical Framework.	5 - 3
	C. Mission Requirements Use	5 - 5
	D. Required Use	5 - 7
	E. Other Transportation for the Conduct of Official Business	5 - 8
	F. Transportation of Spouse, Dependents and Other Non-Federal Travelers	5 - 13
	G. Special Approval and Reporting Requirements	5 - 15
	H. Transportation of Cargo	5 - 17
<hr/>		
CHAPTER 6	MILITARY SPACE AVAILABLE TRAVEL	6 - 1
	A. USCG Military Space Available Travel Program	6 - 2
	B. General Guidelines	6 - 3
	C. Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments	6 - 6
	D. Environmental and Morale Leave Program	6 - 14
<hr/>		
CHAPTER 7	PERSONAL PROTECTIVE EQUIPMENT AND SURVIVAL SYSTEMS	7 - 1
	A. Protective Clothing.	7 - 2
	B. Flotation Equipment	7 - 5
	C. Oxygen	7 - 6
	D. Safety Devices	7 - 7
	E. Minimum Rescue/Survival Equipment	7 - 8
<hr/>		

Table of Contents, Continued

CHAPTER 8	FLIGHT CREW MEMBER DESIGNATIONS, QUALIFICATIONS AND TRAINING	8 - 1
	A. Administrative Requirements for Aviation Units	8 - 2
	B. Designations	8 - 5
	C. Requirements for Designations	8 - 7
	D. Minimum Recurrent Training Requirements for Coast Guard Flight Crew Members Assigned to Operational Flight Duty	8 - 20
	E. Minimum Recurrent Training Requirements for Coast Guard Pilots Assigned to Duty Involving Flying Proficiency (DIFPRO)	8 - 34
	F. Compliance with Recurrent Training Requirements	8 - 36
	G. Annual Proficiency Checks	8 - 38
	H. Miscellaneous Proficiency Requirements	8 - 40
	I. Other Periodic Training	8 - 43
	J. Special Qualification Requirements	8 - 48
	K. Pilot Instrument Qualification	8 - 51
	L. Lapse and Redesignation	8 - 54
	M. Approved Simulators	8 - 58
	N. Coast Guard Aviator Evaluation Board	8 - 59
	O. Duties and Responsibilities of Standardization Units	8 - 60
<hr/>		
CHAPTER 9	RECORDS AND REPORTS	9 - 1
	A. Aviation Logistics Management Information System (ALMIS)	9 - 2
	B. Logging of Flight Time	9 - 3
	C. Flight Pay Entitlement Requirements	9 - 4
	D. Classification of Flights by Coast Guard Aircraft	9 - 6
	E. Electronic Aircraft Logbook	9 - 7
	F. Aviators Flight Logbook	9 - 11
	G. Change of Pilot Designation and Qualification	9 - 13
	H. Miscellaneous Records and Reports	9 - 14
<hr/>		
GLOSSARY		Glossary - 1
<hr/>		
APPENDIX A	STANDARD ORGANIZATION OF COAST GUARD AIR UNITS	A - 1
	A. Introduction	A - 1
	B. General Organizational Principles	A - 2
	C. Standard Unit Organization	A - 3
	D. Duties	A - 4
	E. Watch Organization and Duties	A - 18

Table of Contents, Continued

	F. Unit Orders and Instructions	A - 19
	G. Recommended Management Practices.	A - 20
<hr/>		
APPENDIX B	GENERAL ORGANIZATIONAL PRINCIPLES AND AIRCRAFT CHARACTERISTICS	B - 1
	A. General Organizational Principles and Aircraft Characteristics	B - 1
	B. Aircraft Characteristics	B - 6
	C. Helicopters	B - 9
	D. Airplanes	B - 13
<hr/>		
APPENDIX C	EXCERPTS FROM DHS MANAGEMENT DIRECTIVE 0020.1 (SERIES)	C - 1
	A. Department of Homeland Security Aviation Management and Safety	C - 1
	B. Excerpts from DHS Management Directive 0020.1 (series)	C - 2
	C. Attachment 1: Cost Comparisons with Commercial Transportation	C - 24
	D. Attachment 2: Standard Personnel Salaries and Estimated Hourly Variable Cost Rates for Selected DHS Aircraft Flight Hours	C - 32
<hr/>		
APPENDIX D	AVIATOR FITNESS AND VISION	D - 1
	A. Fitness of Aircrew Personnel	D - 1
	B. Visual Acuity	D - 9
<hr/>		
APPENDIX E	FAA EXEMPTION 5231H.	E - 1
	A. FAA Exemption 5231H	E - 1
	B. FAA Exemption 5231H	E - 2
<hr/>		
APPENDIX F	MISHAPS AND SALVAGE	F - 1
	A. Mishaps and Salvage.	F - 1
<hr/>		
APPENDIX G	UNDERWATER EGRESS TRAINER PERFORMANCE EVALUATION FORM AND USCG AIRCREW SWIM TEST COMPLETION FORM	G - 1
<hr/>		
APPENDIX H	FLIGHT LOGBOOK GUIDE	H - 1

Table of Contents, Continued

- A. Logbooks H- 1
- B. Entry Instructions H- 2
- C. Operational/Instrument Codes H- 7
- D. Examples H- 9

APPENDIX I COAST GUARD AUXILIARY AVIATION I- 1

- A. Coast Guard Auxiliary Aviation Overview I- 1
- B. Missions I- 3

APPENDIX J FORMS J- 1

- A. Forms J- 1

APPENDIX K DISCLOSURE FOR PERSONS FLYING ABOARD FEDERAL GOVERNMENT AIRCRAFT K- 1

- A. Disclosure For Persons Flying Aboard Federal Government Aircraft K- 1

This Page Intentionally Left Blank

Chapter 1

OVERVIEW OF COAST GUARD AIR OPERATIONS

Introduction

This chapter provides an introduction to the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series).. A basic overview of policy and procedures is presented.

In this chapter

This chapter is divided into seven sections:

- Mission of Coast Guard Aviation
 - Authority and Control of Flights
 - Transportation
 - Conduct of Flights
 - Safety
 - Training
 - Mission Planning
-

Section A. Mission of Coast Guard Aviation

A.1. Mission of Coast Guard Aviation

Official Coast Guard mission programs are listed in the Abstract of Operations Reports, COMDTINST 3123.7 (series). Coast Guard Aviation is an operations and logistics component used to support Coast Guard mission programs using all multi-mission air assets. Operational response is the primary mission of Coast Guard aircraft. For this reason, aircraft capabilities are founded primarily on Search and Rescue (SAR), Enforcement of Laws and Treaties (ELT) and Marine Environmental Protection (MEP), Military Readiness and other missions requiring operational response.

Various aircraft types in the Coast Guard also perform a logistical role, providing a variety of choices to tailor aviation support efficiently for different requirements, including cargo and personnel transportation. Coast Guard aviation is highly flexible and can be employed quickly to respond to emergent situations. Assets can be expeditiously redistributed across the country temporarily to provide a "surge" capability, or to respond to special missions.

Coast Guard aircraft are assigned a specific number of program hours per year. These hours are divided among the various mission areas supported by Coast Guard aviation.

A.2. Purpose

This manual prescribes general operating procedures and flight instructions applicable to all aircraft, including unmanned aerial vehicles and lighter than air vehicles, operated by the Coast Guard. This manual is also intended to provide aviation doctrine and a description of the Coast Guard aviation program. It can be used as a guide to mission planning and execution, as well as for the exercise of professional judgment by those in aviation and those whose programs require aviation support.

The chapters and appendices to this manual provide guidance to manage aviation and are directive in nature. Proven and safe procedures shall be used in Coast Guard flight operations. The procedures and directives prescribed in this manual are derived from flight tests and operational experience of the Coast Guard and other Services. No provision of this manual relieves personnel of their duty to use sound judgment or to take such emergency action as the situation demands.

A.3. Procedures

The procedures discussed in this manual are to be used as guides and shall be carried out with sound professional judgment. This instruction is not intended to cover every contingency that may arise, nor every rule of flight safety and good practice.

Successful operations require the exercise of good judgment and common sense at all levels of command. When the need arises, special instructions or waivers will be issued by Commandant (CG-711), however, in the operational environment, mission demands may require on-scene deviation from prescribed instructions or procedures when, in the judgment of the pilot in command, such deviation is necessary for safety or the saving of life. Such deviation must not be taken lightly and must be tempered by maturity and a complete understanding of the aircraft, mission, and crew.

Continued on next page

A.4. Generalization

Because of the need to generalize, wording such as “normally,” “etc.,” “usually” and “such as” is employed throughout this manual. Words or clauses of this nature shall not be used as loopholes, nor shall they be expanded to include a maneuver, situation, or circumstance which should not be performed or encountered.

A.5. Updates and Changes to this Manual

The most current version of this manual is posted on the Commandant (CG-711) web site at <http://cgweb.comdt.uscg.mil/G-OCA/G-OCA.htm>.

Change requests shall be completed using the Coast Guard Air Operations Manual, M3710.1 (series) change form which is located on the Commandant (CG-711) web site under aviation publications. Only recommendations that have been properly routed IAW the submission instructions on the form will be accepted.

Section B. Authority and Control of Flights

B.1. Primary Authority

The Commandant has primary authority for the operation of aircraft in the Coast Guard under 14 U.S.C. §§ 88 and 93

B.2. Clearance

A pilot in command (PIC) receives clearance for a flight from the Commanding Officer. For scheduled flights, this is accomplished through the flight schedule. Nonscheduled flights obtain the permission of the Commanding Officer prior to departure. When this is not possible, such flights may be approved at a lower level. They should be approved as soon as possible after the flight (Chapter 2, paragraph E.2).

Either the Commanding Officer or the PIC may delay a mission if, in the opinion of either, conditions are not safe. The PIC has final responsibility for the safe conduct of the mission. Specific guidance as to authority for flights is contained in [Chapter 2](#). In the case of flights involving transportation of passengers or cargo, guidance may be found in [Chapter 5](#).

B.3. Command and Control

Command and Control (C2) of Coast Guard aviation assets is maintained in a strategic sense by Commandant, in an operational sense by area, district and sector commanders, and in a tactical sense by air station commanders and commanders of vessels with embarked or deployed helicopters and Unmanned Aircraft Systems (UASs). Elements of C2 are delegated to a subordinate command, such as an aviation detachment, when lines of communication are distant or when it is critical to the completion of the mission to have command and control in the actual theater of operations.

Aviation missions are planned with the concurrence of the appropriate operational commander having oversight responsibility.

Except for Air Station Washington, the operational commanders are district or area commanders. Two special use aircraft, currently a C-37 and a C-143, are assigned to Air Station Washington and are primarily used as long range command and control platforms for Coast Guard senior leadership.

Like Air Station Washington, the Coast Guard Aviation Training Center (ATC) in Mobile, AL, is a Headquarters unit. It provides HU-25 aircraft under the operational command of the Eighth District. H-60 and H-65 helicopters, as well as HU-25 airplanes at ATC, are used for pilot training and are under operational control of Commandant (CG-711).

All Atlantic Area C-130 aircraft are under the operational command of the area commander. All other Coast Guard aircraft come under the operational command of the district commanders.

The Coast Guard Aviation Repair and Supply Center (ARSC) in Elizabeth City, NC is a non-operational Headquarters unit which falls under the Assistant Commandant for Engineering and Logistics (CG-4). ARSC's primary mission is to provide Air Stations with depot level maintenance, engineering, supply and information services to support Coast Guard missions.

Continued on next page

B.3.a. Operational Control

Operational Control (OPCON) is the authority to organize and employ aviation forces, assign tasks, designate objectives, and give authoritative direction necessary to accomplish the mission. OPCON includes authoritative direction over all aspects of Coast Guard operations and training necessary to accomplish the missions assigned to the command.

OPCON is the strategic management of an aviation force throughout a wide area of responsibility (AOR) to cover the spectrum of Coast Guard requirements, from daily operational tasking to complex, large-scale emergent response. OPCON resides with the Area Commander and is typically delegated to the District Commander. OPCON for ATC Mobile resides with Commandant (CG-711).

B.3.b. Tactical Control

Tactical Control (TACON) is the command authority for aviation forces made available for tasking. TACON is limited to the detailed direction and control of aviation resources in the operational area necessary to accomplish assigned missions. TACON is inherent in OPCON, however the OPCON authority may delegate TACON of a certain number of its assets to another operational element without releasing OPCON. TACON of aviation assets typically rests with the Commanding Officer of the air station for which those assets are assigned.

B.3.c. Administrative Control

Administrative Control (ADCON) is the responsibility to administratively support operational personnel. ADCON includes personnel management, logistics, maintenance support, individual and unit training, discipline, and similar matters not included in the operational missions of the subject organization. There are few situations where shifting ADCON of Coast Guard aviation forces would be prudent. However, consideration may be given to shifting ADCON of a cutter deployed helicopter for deployments greater than six weeks.

B.4. Execution

Execution of an aviation mission is accomplished at the lowest level possible consistent with management and coordination of all assets participating in the mission. If only a single aviation asset is involved, the PIC is responsible for the execution of the mission.

For Aviation Special Missions (ASM) involving multiple aircraft (e.g., Vertical Insertion (VI), Airborne Use of Force (AUF)) an Air Mission Commander (AMC) shall normally be assigned and will be responsible for the overall mission execution. If aviation assets are operating jointly with surface or other assets, the AMC shall be responsible for execution of the aviation portion of the mission.

For Maritime Homeland Security (MHS) missions involving multiple aircraft (e.g., Vertical Insertion (VI), Airborne Use of Force (AUF)), an AMC shall normally be assigned and will be responsible for the overall mission execution. If aviation assets are operating jointly for other missions (e.g., SAR) with surface or other assets, the AMC shall be responsible for execution of the aviation portion of the mission.

(continued on next page)

Continued on next page

B.4.a. Execution
(continued)

If two or more aircraft are operating jointly for other missions (e.g., SAR), the responsibility for the mission normally passes to the PIC of the aircraft with the better communications capabilities. When working with surface forces, responsibility for coordinating air and surface mission execution normally rests with the surface element having the greatest communications capability.

**B.5. Aircraft
Configuration
Control**

The Coast Guard has established an Aircraft Configuration Control Board (ACCB) to review all proposed aircraft modifications and changes. Aircraft Configuration Control is one of the most critical elements in ensuring the overall safety of aircraft, standardization of aircraft/mission equipment, and logistical support of aircraft and aircraft related systems. As such, no aircraft modifications or changes will be made without specific authorization from Commandant (CG-41) and (CG-711) and no in-flight testing will be conducted without specific authorization from Commandant (CG-711).

Any authorization to modify aircraft and/or conduct tests must consider a wide range of factors including:

- Structural loading
- Aerodynamic characteristics
- Weight and balance
- Electrical load analysis
- Aircraft performance
- Prototype installation and development test and evaluation (DT&E)
- Trial installation and operational test and evaluation (OT&E)
- Electromagnetic Interference (EMI)/Electromagnetic Compatibility (EMC) testing
- TEMPEST testing for COMSEC systems and equipment

The ACCB Process Guide is maintained by Commandant (CG-41).

Section C. Transportation

C.1. General

The carrying of passengers and cargo on Coast Guard aircraft is strictly regulated. Because of the cost of operating aircraft and the public scrutiny of passenger transportation, it is necessary to ensure passengers who ride on Coast Guard aircraft have a genuine need to do so.

The basic policy for transportation on Coast Guard aircraft is contained in OMB Circular A-126, Improving the Management and Use of Government Aircraft; and 41 CFR Chapters 300-304. This policy is interpreted by the Aviation Management and Safety, Department of Homeland Security (DHS) Management Directive (MD) 0020.1 (series) (excerpts of which are included in this manual as [Appendix C](#), Management and Use of Department of Homeland Security Aircraft), providing guidance for all aircraft operated within the Department of Homeland Security, including Coast Guard aircraft. DHS Management Directive 0020.1 (series) is to be used as the primary reference source when making specific transportation request determinations.

In general, the method of transportation that entails the least cost to the government will be the one employed.

Transporting mission essential cargo is considered an operational and valid use of an aircraft. The carrying of cargo is subject to regulations similar to the regulations governing the carrying of passengers. Federal and military regulations prescribe the method of carrying hazardous materials aboard aircraft (see Chapter 5, section H).

C.2. Requests for Transport

When requesting transportation on Coast Guard aircraft, the requesting agency or office must provide sufficient information so that transportation feasibility may be determined. The general information required to enter the determination process is in [Chapter 5](#) of this manual. It is the responsibility of the requester of the transportation, not the Coast Guard unit providing the transportation, to provide this information.

Section D. Conduct of Flights

D.1. General

A variety of factors shape the manner in which flights are conducted. The guidance concerning the conduct of flights on Coast Guard aircraft is divided into mission planning and mission execution. This guidance may be found in [Chapter 3](#) and [Chapter 4](#) of this manual.

D.2. Risk Management

Pilots manage an aircraft to minimize the inherent risk of critical mechanical failure occurring at the most crucial moment. For example, in a fixed wing (F/W) aircraft, the determination of an aircraft's ability to take off safely is based on the assumption that the single most critical engine will fail at the most critical point in the takeoff.

If the aircraft is capable of either aborting the takeoff or safely executing the takeoff at the moment of failure, the takeoff is permitted. As another example, a helicopter aircrew may, under certain conditions, have to enter a hover knowing that if one engine fails during the hover, the helicopter will be unable to maintain flight. Under those circumstances, the pilot must minimize the duration of the maneuver and hover over the clearest and least congested area possible.

This concept of contingency planning is embedded in military, Federal Aviation Administration (FAA), and International Civil Aviation Organization (ICAO) aviation standards. Operational commanders, commanding officers, and aircraft commanders are faced with making mission decisions, and they carefully weigh the urgency of each mission and assess the benefits to be gained versus the risks involved. While all possible contingencies cannot be addressed, the following paragraphs establish policy guidelines to be used in making risk versus gain analyses for various aircraft missions.

D.2.a. National Defense

Due to its status as an armed force under 14 U.S.C. § 1, damage to or sacrifice of the aircraft is acceptable in the defense of the United States, its citizens, and/or installations

D.2.b. Search and Rescue (SAR) and Law Enforcement (LE)

For SAR missions, potential risks to the aircraft and crew shall be weighed against risks to the personnel and/or property in distress if the mission is not undertaken. Probable loss of the aircrew is not an acceptable risk. Additionally, the individuals making the decision shall consider the effects of exposing the personnel in distress to the additional risks associated with flight operations, especially if the physical condition of those persons in distress is already impaired. In the case of LE, potential risks to the aircraft shall be weighed against the risk of bodily harm to LE personnel, hostages, and innocent parties if the mission is not undertaken.

D.2.b.(1) Warranted Efforts

The probability of saving human life warrants a maximum effort. This includes the use of maximum effort takeoff and landing procedures as defined in the C-130 flight manuals. When no suitable alternatives exist and the mission has a reasonable chance of success, the risk of damage to or abuse of the aircraft is acceptable, even though such damage or abuse may render the aircraft unrecoverable.

Continued on next page

D.2.b.(2) Warranted
Risks — Human Life

The possibility of saving human life or the probability of preventing or relieving intense pain or suffering warrants the risk of damage to or abuse of the aircraft if recovering the aircraft can be reasonably expected.

D.2.b.(3) Warranted
Risks — Property

The probability of saving property of the United States or its citizens warrants the risk of damage to the aircraft if the value of the property to be saved is unquestionably greater than the cost of aircraft damage and the aircraft is fully expected to be recoverable.

D.2.b.(4) Warranted
Risks — Evidence

The possibility of recovering evidence and interdicting or apprehending alleged violators of federal law does not warrant probable damage to or abuse of the aircraft.

D.2.b.(5) Logistics and
Other

Logistics or other missions having little or no urgency shall not be prosecuted if they expose the aircraft to hazards greater than those encountered during the course of routine missions.

Section E. Safety

E.1. General

The fundamental reasons for a comprehensive aviation safety program are the well being of personnel and the preservation of limited resources. To achieve this goal, the Coast Guard safety program establishes organizational requirements to identify hazardous situations, take corrective actions to reduce risks and/or eliminate danger, and disseminate information to promote the safety and occupational health of military and civilian personnel. The Safety and Environmental Health Manual, COMDTINST M5100.47 (series), provides specific guidance for the flight safety program.

E.1.a. Background

The concept of flight safety dates back to 1942 when the Army Air Corps suffered more losses in training mishaps than in combat action. To reverse the trend, military leaders implemented a comprehensive aviation safety program that immediately reduced training accident rates. As military pilots migrated to the developing commercial aviation industry, they brought their experience and faith in aviation safety programs with them. Whether in government or commercial aviation, the precept remains the same: ensure flight operations are conducted in the safest possible manner consistent with mission requirements.

E.1.b. Human Factors

During the early 1970s, a succession of mishaps involving “state-of-the-art” commercial airliners renewed interest in aviation safety programs. While analyzing these accidents, National Transportation Safety Board (NTSB) investigators identified “human factors” as a significant and common element.

The realization that “pilot error” was contributing to more and more mishaps caused the FAA, international safety organizations, the military, and commercial airline companies to expend significant energy and money to learn more about “human factors” and their relationship to critical errors by flight crews.

E.1.b.(1) Studies

Human factors studies focused primarily on physical factors impacting the ability of flight crews to exercise good judgment. Chief among those factors was fatigue. Stressors like constant vibration, loud noises from machinery and radios, illness or poor physical conditioning, improper diet, and irregular or insufficient sleep patterns can create both immediate and long-term (i.e., chronic) fatigue. Studies indicated any decrease in a flight crew member's ability to function normally will greatly increase the likelihood of error. This influence becomes particularly significant during operations at night or in poor weather conditions.

E.2. Monitoring and Controlling

The Coast Guard monitors and controls crew mission days, flight time, and other fatigue related factors. Tools like crew utilization standards are not designed to hinder operational commanders in mission planning or execution; rather, they are designed to minimize injury and damage and to preserve limited capital and personnel resources for future use.

E.3. The Aviation Safety Program

Continued on next page

E.3.a. Safety Attitude

Effective aviation safety is an attitude, not an add-on. For aviation safety to be truly effective, safety must be a pervasive notion supported by leadership throughout Coast Guard aviation. Safety is a team effort focusing on operations and engineering with the common goal of improved operational performance by reducing mishap losses.

E.3.b. Command Emphasis

Effective aviation (flight) safety requires continuous command emphasis and leadership example. If hazards are recognized and effectively reduced or eliminated, mishap potential will be reduced and the operational effectiveness of the air unit will be enhanced. Experience has shown that a strong command mishap prevention (loss control) policy will reduce aircraft mishap potential and thereby enhance overall mission effectiveness.

E.3.c. Aviation Safety Goal

The goal of the aviation safety program is to support operational aviation readiness and mission accomplishment which is characterized by mishap free operations. To accomplish this goal, the program provides for the identification of hazards, the formulation of corrective recommendations to eliminate hazards and reduce risks, and the dissemination of information. The Safety and Environmental Health Manual, COMDTINST M5100.47 (series), outlines the flight safety program in detail.

E.3.d. Aviators and Aviation Mishaps

Most mishaps are preventable and are usually the result of human error, mechanical failure or a series of both. Most mechanical failures may be attributed to a human error at some point, either in the design, maintenance, or operation of equipment. If mishaps are to be prevented, it is necessary to detect and guard against human error at every stage of an air operation. This requires a continuous review and communication between all activities affecting aviation operations and maintenance so that mistakes or potential mistakes can be identified, evaluated and corrected.

E.3.e. Aviation Mishap Communication

It cannot be overemphasized that safety review and communication of mishap events (or potential events) is focused solely upon improving procedures and/or equipment and preventing future mishaps. Such review is not meant to punish, criticize, or embarrass personnel involved. Essential to this part of the aviation safety program is a free exchange of information (e.g., aviation mishap messages) on matters relating to the safety of aviation operations. Full and free communication of safety information is essential if safety efforts are to effectively evolve and be proactive to meet changing operational needs.

E.3.f. Risk Management

Operational commanders, command center controllers, air station commanding officers and aircraft commanders are continuously making operational mission decisions. As missions progress, each must weigh and continually reassess the urgency of each mission and assess the benefits to be gained versus the risks involved. The safety of the aircrew and aircraft must always be one of the primary considerations integrated into the fabric of aviation mission planning and execution. The full scope of assets available to support the mission and promote mission safety should be considered.

Continued on next page

E.3.g. Crew
Participation

Each individual connected with air operations, whether in an operational or supporting role (e.g., aircrew, scheduling, maintenance), contributes directly to the effectiveness of the aviation safety program. Effective safety is a team effort and requires the active participation of “all hands.” Specific responsibilities and requirements are prescribed in the USCG Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

E.3.h. Mishap
Investigation

When a mishap has occurred, it is necessary to investigate and analyze the mishap thoroughly. In this way, full use can be made of all lessons learned from the event. Procedures for reporting, investigating, and analyzing aircraft mishaps are contained in the Safety and Environmental Health Manual, COMDTINST M5100.47 (series). DOD, FAA, and/or National Transportation Safety Board (NTSB) participation in Coast Guard Aviation mishap investigations varies with the mishap circumstances.

E.3.h.(1) Coast Guard
Only

Mishaps involving only Coast Guard active duty aviation resources are governed solely by the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

E.3.h.(2) Coast Guard
and DOD

Joint Service mishaps are governed by the Safety Investigation and Reporting Joint Service Mishaps Memorandum of Understanding (MOU). Contact Commandant (CG-1131) for guidance.

E.3.h.(3) Coast Guard
Air Auxiliary

Coast Guard Air Auxiliary mishap guidance is provided in the Safety and Environmental Health Manual, COMDTINST M5100.47 (series) and the Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series) for Class C & D mishaps. For Class A & B mishaps, contact Commandant (CG-1131) for guidance on possible NTSB involvement.

E.3.h.(4) Coast Guard
and Civil Aviation

Regardless of what agencies are involved, free and uninhibited exchange of safety information is vital to the interest of mishap prevention. Title 49, United States Code, section 1132 allows the NTSB to serve as the primary investigative agency for any mishaps involving both civil and Coast Guard aircraft or in instances where Coast Guard aircraft have played a role in civilian fatalities, casualties or property damage. Mishaps involving a violation of an FAA rule by Coast Guard personnel may be investigated by the NTSB.

COMDTINST 5100.28 (series) and a joint DOD/USCG MOU details the participatory relationships between the NTSB, FAA, USCG and DOD, relative to accident investigation. It provides for military participation in certain NTSB aircraft mishap investigations, NTSB or FAA participation in certain military aircraft mishap investigations, and the release of certain military aircraft mishap safety investigation information to the NTSB and the FAA.

Commandant (CG-1131) coordinates participation on aviation mishap investigations between the USCG and other agencies and should be contacted immediately after any event that could be of interest to FAA/NTSB/DOD.

Continued on next page

E.3.i. Aviation Safety Privilege

A thorough understanding of the concept of privilege and confidentiality as used in the safety program is essential for the proper investigation of aviation mishaps. These concepts are critical to the success of the Coast Guard safety program. The concept of privilege is intended to provide for full disclosure of mishap information (which otherwise may not be disclosed) essential to determining the true causal factors during mishap investigation. Only if true causes are identified can effective action be taken to prevent reoccurrence, thereby reducing future injury and damage. When necessary, a written assurance of confidentiality shall be given to a witness in order to obtain complete and candid information about the circumstances surrounding a mishap. Further information on the Coast Guard concept of privilege can be found in found in the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

E.4. Requests for Grounding

A voluntary request for temporary grounding should not be considered a sign of weakness. It should be treated as an indication of the maturity and sound judgment of the individual involved. The practice of grounding aircraft for maintenance deficiencies is well recognized; a similar attitude should prevail concerning the grounding of aircrew members. Aircrew personnel should consult their flight surgeon, or other doctor, when the slightest doubt as to their fitness exists. Commanding officers should support an unbiased and healthy attitude toward grounding of flying personnel in the interest of mission readiness and operational safety.

E.5. Training

Realistic training within the bounds of safe propriety is essential to the successful completion of aviation missions. Coast Guard pilots and aircrew must maintain sound knowledge of operational hazards, emergency procedures, and aircraft systems, along with a high level of psychomotor skills to operate complex platforms safely and successfully. Such skills deteriorate rapidly if not exercised regularly. Pilots are provided realistic training opportunities in aircraft simulators to experience demanding and potentially catastrophic situations that would not otherwise be feasible due to the risks. Pilots and crews are afforded other training opportunities in-flight (e.g., hoisting, air drops, instrument approaches) and on the ground (e.g., egress and survival). Effective and focused use should be made of precious training time to maximize benefit to both individual and crew performance.

E.6. Automation**E.6.a. Automation Philosophy**

The purpose of automation is to enhance safety and mission effectiveness through greater efficiency, increased precision, higher situational awareness and reduced crew workload. Aircrews will be proficient in operating the aircraft in all levels of automation consistent with their duties. Crew members must understand the capabilities of the aircraft and be proficient at changing the levels of automation. The level of automation used should be the highest level appropriate for the situation.

Continued on next page

E.6.b. Automation Pyramid

The hierarchy of automation can be thought of as a pyramid with manual manipulation of systems at the bottom of the pyramid and full automation at the top of the pyramid. As crews move up the pyramid, situational awareness (SA) increases and workload decreases. Conversely as crews move down the pyramid, SA decreases and workload increases. (Example: flight controls without flight director guidance at the bottom of the pyramid and the autopilot coupled to the INAV/CDI guidance at the top of the pyramid.)

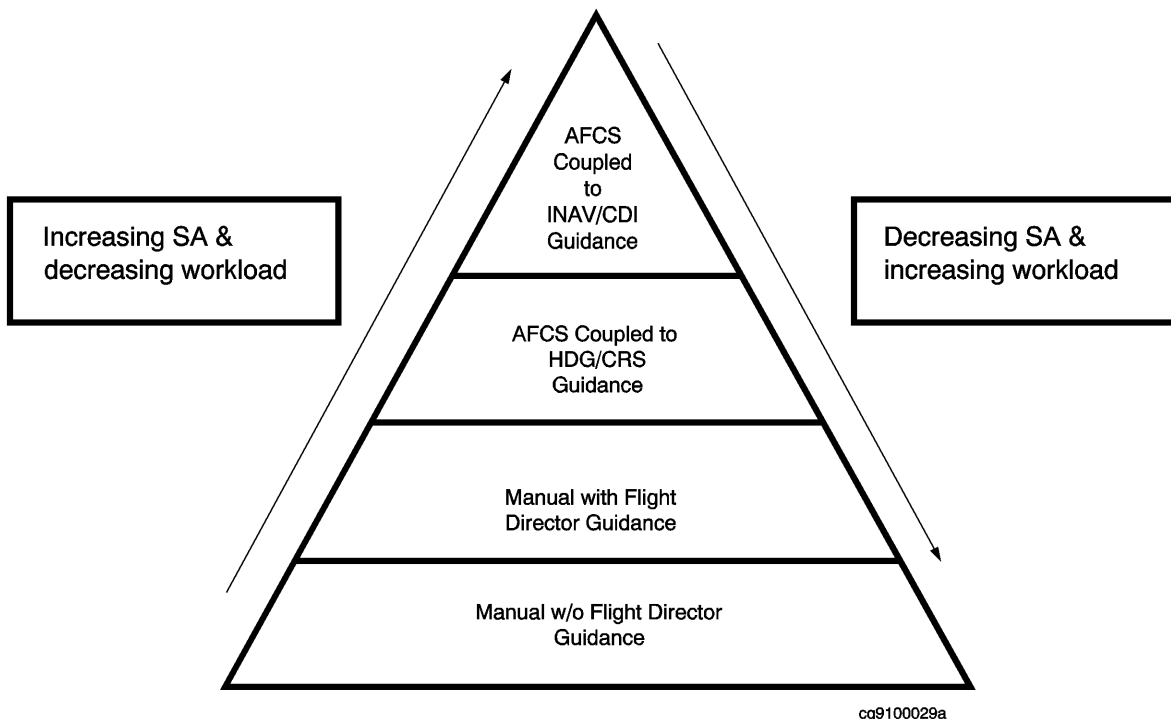


Figure 1-1.

E.6.c. Automation Complacency

Systems are not substitutes for vigilance and basic aircrew proficiency. Over dependence on automation can quickly lead aircrews into danger. Crew members shall perform normal systems monitoring duties in conjunction with utilizing advisories from automated alert systems. Common sense dictates that aircrews practice basic chart reading and navigation skills to maintain proficiency to prepare for situations when automated systems fail.

Section F. Training

F.1. General

Training is essential to the successful completion of an aviation mission. Pilots and aircrew must maintain high levels of psychomotor skills to operate complex platforms safely and successfully. Such skills rapidly deteriorate if not regularly exercised. Through a combination of formal transition and upgrade training syllabi, annual proficiency training, annual check flights, and recurrent training, aircrew members maintain a high level of effectiveness and performance. Specific training and aircrew designation requirements are discussed in [Chapter 8](#).

F.2. Standardization of Training and Procedures

Coast Guard Aviation uses standardized training and procedures to ensure that flight operations are conducted in the safest possible manner consistent with mission requirements. Within any aircraft type, all aircrew will follow the same checklists and use the same procedures in clearly defined circumstances. By adhering to an approved set of standard procedures for repetitive, routine tasks, aviators create a discipline that ensures critical details are not overlooked. Necessary precautions are always taken to ensure the well being of the crew and the aircraft.

F.3. Standardization and Crew Formation

Standardization also permits randomly selected aviators to form a disciplined, coordinated crew on any aircraft in which they have been designated as qualified in type and model.

F.4. Standardization — Aviation Training Center

The Aviation Training Center develops and promulgates standardized flight procedures. It evaluates adherence to these procedures through annual Standardization Program Visits to all operational units. These visits also examine the station's training program, ensure desired skills and standards are taught by designated instructors, review aviator proficiency under actual conditions, and provide refresher training opportunities.

Other aviation training programs which support standardization include one-week annual proficiency checks of all operational pilots using visual flight simulators, Night Vision Goggle (NVG) training, and Crew Resource Management training.

F.5. Designation and Qualification — Pilots

Generally, newly qualified pilots arrive at an air station with a designation of Copilot after completing a training syllabus designed to teach them how to fly a particular type of Coast Guard aircraft. As they gain flight experience, they complete an additional training syllabus to achieve the designation of First Pilot (FP). FPs may be designated as PIC for most, but not all, flight missions.

After gaining more flight experience, FPs complete another training syllabus before they become Aircraft Commanders (ACs) capable of being PIC for any Coast Guard mission. Some ACs complete another training syllabus leading to the designation of Instructor Pilot (IP) or Pilot Examiner (PE), qualifying them to teach and examine other pilots' progress through training syllabi.

Continued on next page

F.6. Designation and Qualification — Crew Members

Enlisted crew members also require in-flight training so they can be designated as Basic Air Crewman (BA), Flight Mechanic (FM), Avionicsman (AV), Radioman (R), Dropmaster (DM), Sensor Systems Operator (SSO), Flight Engineer (FE), Tactical System Operator (TSO), Navigator (N), Aviation Gunner (AG), Rescue Swimmer (RS) or Aviation Mission Specialist (AMS).

Aviation mission specialists are non-aircrew officers and enlisted personnel who perform specialized mission functions aboard Coast Guard aircraft. Some of the current specialized positions are aerial ice observers, sensor system operators, tactical system operators, aerial gunners, and aviation medical technicians.

F.7. Training Hour Targets

It has been estimated that approximately 20 percent of all fixed wing (F/W) flight hours and 40 percent of rotary wing (R/W) hours must be dedicated to training so pilots and crew members can maintain skill proficiency and complete the various training syllabi leading to the next designation. At rotary wing units performing Aviation Special Missions, the training percentage may be higher depending on the array of special missions assigned by that unit's district or area.

Section G. Mission Planning

G.1. Coordinating Mission Requests

The operational commander coordinates with the air station commanders to allocate flight hours for each aircraft type for planned Coast Guard missions. Periodically, a district operations representative receives requests for the use of district aviation assets from the district program managers. Once the requirements are identified, the appropriate office coordinates with the representatives of each air station to schedule known and anticipated missions. The missions are divided on the basis of the most suitable aircraft to do the mission, the availability of the different types of aircraft, and the number of funded flight hours available to accomplish the mission.

Commanders who request aviation support should understand that program hours may limit the number of flight hours available to support a given mission. Air stations will always respond to emergencies, but depending on the number of flight hours remaining, they may be restricted in the number of flight hours available to support more routine missions. A similar process occurs within each area.

G.2. Coordinating Mission Requests Outside District or Area

When a unit plans for the use of an asset located outside its district or area, the unit planner should use a two-step process. First, informal telephone inquiries are made to the command center of the operational commander and to the operations department of the air station owning the required assets. This serves to confirm that the asset requested is the most suitable one, and to allow all parties to discuss any considerations that may not be obvious (e.g., conflicts with other expected tasking).

The second step is for the requesting unit to send a formal request for tasking message via its district to the operational commander of the requested unit, with informational copies to the area commander and the air station. Normally, the operational commander will send the air station a tasking message for the mission and formally authorize direct liaison between the requester and the air station for subsequent planning.

G.3. Participation of Mission Experts

Participation of mission experts during the planning and execution of a mission enhances mission effectiveness. Any mission requiring a level of specialized expertise should include such an expert in the planning and execution of the mission.

G.4. Short Notice Missions Request Procedures

Unscheduled missions, missions that need immediate response, or missions occurring at other than normal working hours are requested through the appropriate district or area command center. Although they are Headquarters units, strike teams request aviation support through their area command center. District units request aviation support through their own district command center.

Continued on next page

G.5. Short Notice Missions Requests Outside District or Area

Requests for aviation assets under the responsibility of another district commander are made via the requesting party's command center to the area command center and then to the district command center having responsibility for the particular aviation asset requested. If time is critical, the command centers may authorize direct liaison with the air station.

G.6. Requests Originating from Outside the Coast Guard

Routine requests from non-Coast Guard parties for Coast Guard aviation support are best directed through the Coast Guard program most clearly aligned with or likely to benefit from the mission. The affected Coast Guard program will evaluate the request and forward as appropriate through their chain of command to the Assistant Commandant for Operations. If alignment with a Coast Guard program is not clear, the Office of Aviation Forces (CG-711) can serve as the initial entry point for these organizations. Their requests will be directed to the appropriate program for evaluation. Requests without alignment or benefit to a Coast Guard program can still be approved but will generally require reimbursement. Commandant (CG-711) will coordinate these requests.

Emergency requests from non-Coast Guard parties for Coast Guard aviation support should be directed to the appropriate Area Command Center. These requests will be forwarded to the Coast Guard Command Center which will coordinate evaluation/approval.

Specific procedures for handling requests for the transportation of passengers or cargo are discussed in Chapter 2, section F and [Chapter 5](#) of this manual.

G.7. Mission Prioritization

When the demands for Coast Guard aviation assets exceed the ability of the commander to fulfill each mission request, the missions are prioritized. The highest priority is given to emergent threats. Threats to national security, serious personal injury or loss of life, and major property loss are prioritized in that order. Less emergent threats or threats that are judged less catastrophic receive a lower mission priority.

Potentially large-scale pollution incidents need to be assessed as early as possible. Depending on the circumstances, a major spill can be a national security threat, a serious violation of federal law, a threat to life and property, or a regional economic catastrophe. Mission support of such a threat should receive very high priority. Routine missions, such as harbor patrols, may be deferred or canceled if another mission with a higher priority occurs.

G.8. Factors Affecting the Mission

The following "principles" of Coast Guard Aviation affect the execution of a mission. They should therefore be considered during mission planning to ensure success.

Continued on next page

G.8.a. Aircraft Characteristics

Knowledge of specific aircraft characteristics is necessary in determining the proper employment of a specific aircraft type or combination of types. In general, F/W aircraft are characterized by speed, endurance and the ability to cover large distances. R/W aircraft are characterized by the ability to hover, to land and takeoff without the use of runways. In general, R/W aircraft can get closer to specific objects than F/W aircraft, which must maintain a minimum safe forward speed.

Primary factors limiting the ability of an aircraft to perform a mission include fuel requirements, adverse weather, and crew utilization standards. The magnitude of the limitation imposed by each of these factors depends on the type of aircraft in question. Generally, F/W crews can be used for longer periods of time than R/W crews. Some aircraft are more capable in certain meteorological conditions than other aircraft.

G.8.b. Flight Profile

The desired flight profile determines the rate that fuel is expended, and thus affects endurance and range. Flying at maximum speed for rapid response consumes more fuel and reduces on-scene endurance. More fuel will extend endurance, but it may limit the load carrying capability of the aircraft. When possible, flying at higher altitudes reduces fuel flow and increases speed, thus increasing range. For F/W aircraft, this difference can be dramatic.

G.8.c. Safety

The safety of the crew and the aircraft must always be the primary frame of reference in the planning and execution of an aviation mission. This is based on the fundamental management principle of preserving expensive resources so they can be used again. The loss of a single air frame has a direct effect on the Coast Guard's ability to carry out its mission. In most cases, the airframe will not be replaced. The loss of individual expertise and experience can only be overcome with time and additional monetary investment in training replacements. This is not to say risks will not be taken; rather, risks will be calculated and managed with regard to the potential benefit.

G.8.d. Aircrew Utilization Standards

Aircrew utilization standards help reduce fatigue induced accidents. Safety experts agree that human error is one important, if not the most significant, factor in aviation mishaps. Although "to err is human," fatigue causes errors to be made more frequently. An alert aviator will catch and correct most errors, but a tired aviator, making more frequent errors, is less likely to catch and correct all errors and is more likely to have a mishap. Aircrew utilization factors may be found in [Chapter 3](#).

Continued on next page

G.8.e. Readiness

Coast Guard aircraft are ready to perform their assigned missions 24 hours per day. All Coast Guard air stations, except CGAS Washington, maintain at least one B-ZERO, or "ready," aircraft at all times. Some air stations may have more than one type of aircraft in a ready posture (i.e., one R/W and one F/W aircraft). The ability of a station to maintain more than a single aircraft in a ready status is limited by the number of aircraft and people assigned and available. A ready aircraft may be airborne at any given time performing operational or training missions.

B-ZERO aircraft are district or area assets. In the Pacific Area, all B-ZERO aircraft are under the direct control of the districts. In the Atlantic Area, all HC-130s are under the operational control (OPCON) of the area. All other aircraft in the Atlantic Area in a B-ZERO status are controlled by the districts.

G.8.f. Aircraft Management

Funding constraints limit the numbers of Coast Guard aircraft, personnel, and program flight hours. Therefore, these resources must be carefully managed.

Efficient utilization of the Coast Guard's aviation assets requires careful planning even though many missions are unplanned responses to emergent situations. Area and district commanders and commanding officers of air stations should consider several planning factors when determining how to use the available program flight hours. These include, but are not limited to:

- Past and projected emergent response requirements
- Projected aircrew training requirements
- Projected non-emergent operational requirements

When planning non-emergent operations, every opportunity to make efficient use of flight hours should be considered. For example, if aircraft are to be deployed to a forward location, transportation of personnel or cargo should be coordinated with flights to and from the forward location whenever possible rather than scheduling separate logistics flights.

G.8.g. Airspace Restrictions

Airspace restrictions may limit the ability of an aircraft to operate in a given area. The airspace along the coastal United States is controlled at different times by a variety of agencies, primarily the FAA, the Navy and the Air Force. Examples include control zones around busy airports and military warning areas. Depending on the way the airspace is being used, Coast Guard aircraft may be restricted in their access to portions of certain airspace.

For preplanned missions, airspace reservations should be made 24 hours prior to use, if possible.

For emergent missions, delays may occur before Coast Guard aircraft can safely enter restricted airspace being used for activities that may pose a hazard to flight. Examples include gunfire exercises, missile launches, air combat maneuvering, etc.

Continued on next page

G.8.h. Fuel Reserves

Aircraft must have adequate fuel reserves on board. Federal Aviation Regulations (FARs) require all aircraft to land with reserve fuel. The amount of fuel reserve varies with the length of time an aircraft is airborne and the weather conditions at the intended point of landing. The reserves can be as little as 20 minutes of fuel for R/W aircraft and 45 minutes for F/W aircraft under perfect weather conditions, or they can be several hours' worth of fuel if the aircraft must make contingent plans for diverting to an alternate airfield due to bad weather at the intended destination.

G.8.i. Navigation and Communications

Communication between air and surface elements should leave no doubt about the method of identifying courses and positions. Aircraft navigate with primary reference to magnetic headings and courses, and use latitude and longitude for fix positions, aeronautical navigation aids and geographic references. The charts, navigation aids, and equipment aviators use differ significantly from those used by mariners.

G.9. Communications, Navigation, Surveillance/Air Traffic Management Requirements

Communications, Navigation, Surveillance in Air Traffic Management (CNS/ATM) or Global Air Traffic Management (GATM) is changing current Air Traffic Control (ATC) methods and procedures through the use of new technology. CNS/ATM began in the 90s to address growing air traffic congestion, degrading traffic control systems, saturated communication frequencies and the need for increased flight efficiency and improved flight and ground safety. The FAA, International Civil Aviation Organization (ICAO), and DOD have plans to globally modernize 21st century air traffic management largely based on increased automation and technology.

G.9.a. CNS/ATM Planning

CG aircrews must recognize that operations overseas, in foreign or international airspace can now be subject to new CNS/ATM requirements. Not all CG aircraft are compliant with current CNS/ATM requirements. Prior to operating OCONUS aircrews shall review CNS/ATM requirements applicable to their aircraft in the assigned foreign and international airspace under ICAO conventions. Each sovereign nation has undertaken independent schedules for implementation of differing CNS/ATM requirements. Aircrews shall compare their flight plans and geographic CNS/ATM requirements with their aircraft's capability to comply prior to flight.

G.9.b. Special Handling

Special handling and waivers for CNS/ATM compliance have been standard with in ICAO conventions. Each nation can have differing exceptions that apply to state and military aircraft. CG aircrews shall not rely on waivers and special handling from ATM facilities for flight planning and aircraft operations. DOD has reported that air traffic congestion within Europe has prevented ATM from accommodating noncompliant military aircraft with requested special handling. This can result in long delays, exclusion from specific airspace and locations, increased operational costs and rerouting of flights.

Continued on next page

**G.9.c. CNS/ATM
Operations**

As per Title 14 USC 3, the USCG is required to remain interoperable with U.S. Navy forces and can be globally deployed in time of war in support of naval operations. USCG operations by nature require interoperability with DOD, civil and commercial air traffic. Commandant (CG-711) in coordination with Commandant (CG-41) and Commandant (CG-113) shall plan, coordinate and provision CG aircraft for insured flight safety, global mobility, interoperability and access to sovereign airspace. Commandant (CG-711) shall direct and administer aircrew training as needed for emerging CNS/ATM systems, flight operations and procedures. Commanding officers and Pilots in Charge (PIC) shall review airspace CNS/ATM requirements and insure compliance or adequate flight management provisions with required capabilities in accordance with FAA, ICAO and DOD conventions and regulations. Commandant (CG-711) and operational commanders shall be notified in the event that aircraft non-CNS/ATM compliance results in impact to CG flight operations.

**G.10. Mission
Objectives**

Clear and realistic mission objectives should be agreed upon prior to a flight. This enables the aircrew to plan the most effective means for accomplishing the mission, and it provides the customer with a reasonable measure of the effectiveness of the sortie.

Changes to a mission while the aircraft is airborne often cannot be avoided, but it must be understood that they come at the cost of time and fuel used to revise the flight plan for the remainder of the sortie.

**G.11. Post-Mission
Reports**

Post-mission reports exchanged between the aviation element and the supported element are fundamental parts of a satisfactory mission. The complexity of the report depends on the scope of the mission.

A simple telephone call may be sufficient, or a formal written report may be necessary. Besides being the means of transmitting the results of the mission, the report should clarify any changes or problems encountered in meeting the mission objectives.

Without an honest appraisal of the mission performance by both parties, neither party has a basis or incentive to improve the manner in which a mission is conducted in the future.

Chapter 2

FLIGHT AUTHORIZATION AND CLEARANCE

Introduction

This chapter provides information on the authorities and responsibilities involved in the operation of Coast Guard aircraft. This includes the authority to operate aircraft and to approve, direct, fly, and command flights, as well as an explanation of the authorized uses of Coast Guard aircraft.

In this chapter

This chapter is divided into six sections:

- Authority for the Coast Guard to Operate Aircraft
 - Authorized Official Uses of Coast Guard Aircraft
 - Authority to Approve, Direct and Initiate Flights
 - Personnel Authorized to Pilot Coast Guard Aircraft
 - Personnel Authorized to Command Coast Guard Aircraft
 - Flight Clearance Authority for Coast Guard Aircraft
-

Section A. Authority for the Coast Guard to Operate Aircraft

A.1. Authority

The basic authority for the Coast Guard to operate aircraft is contained in 14 U.S.C. §§ 2, 88 and 93. This authority is further embodied in the Federal Travel Regulations, codified at 41 C.F.R. Chapters 300-304. Authority is also delegated under this manual and other Coast Guard policies.

A.2. Policies and Reporting Requirements

OMB Circular A-126, Improving the Management and Use of Government Aircraft, DHS Management Directive 0020.1, Aviation Management and Safety (series) (excerpts from which are included in this manual as [Appendix C](#), and this manual prescribe policies and reporting requirements for the use of Coast Guard aircraft.

A.3. Responsibility

The primary responsibility and authority for the operation of Coast Guard aircraft is vested in the Commandant under 14 U.S.C. §§ 88 and 93. Coast Guard aircraft shall be operated only for authorized official purposes and shall be used in the most cost-effective manner possible.

Section B. Authorized Official Uses of Coast Guard Aircraft

B.1. Mission Requirements Use

Coast Guard aircraft are used to support programs which must be accomplished to carry out official responsibilities as authorized or required by statute. Support to such programs constitutes Mission Requirements Use of aircraft. All flights as Mission Requirements Use by Coast Guard aircraft shall be justified, authorized and approved. Mission Requirements Use is normally conducted as the primary purpose of flight (See Chapter 5, section C, for policy on transportation of passengers in conjunction with Mission Requirements Use, and Chapter 5, section H, for policy on transportation of cargo).

B.1.a. Defined

Coast Guard Mission Requirements Uses are defined and described by the various Employment Categories in the Abstract of Operations Reports, COMDTINST M3123.7 (series).

B.2. Required Use Transportation

Use of Coast Guard aircraft for Required Use Transportation as the primary purpose of flight is reserved for certain Coast Guard officials or employees for the following reasons:

- Bona fide communications or security needs of the traveler's organization
- Exceptional scheduling requirements

B.2.a. Policy

All Required Use Transportation must be approved in advance and in writing. See [Appendix C](#) (excerpts from DHS Management Directive 0020.1 (series), Aviation Management and Safety) and Chapter 5, section D.

B.3. Other Transportation for Official Business

In addition to Mission Requirements Use or Required Use purposes, Coast Guard aircraft may also be used for Other Transportation for Official Business for passengers and/or cargo. This is transportation on Coast Guard aircraft which may be approved only if such use is either:

- Cost effective.
- If no commercial airline or aircraft service, including charter, is reasonably available to effectively fulfill the traveler's requirement (i.e., able to meet the traveler's departure and/or arrival requirements within a 24-hour period, unless the traveler demonstrates that extraordinary circumstances require a shorter period).

B.3.a. Policy

Where use of or transportation on Coast Guard aircraft for official business is deemed necessary by officials/employees of other federal agencies, reimbursement for the cost of aircraft operation may be required.

Policy on transportation of passengers is specified in [Chapter 5](#) and in [Appendix C](#) (excerpts from DHS Management Directive 0020.1 (series), Aviation Management and Safety).

Continued on next page

B.4. Reimbursable Use

The Coast Guard enters into Reimbursable Use agreements with other government agencies in which the cost of the service provided must be recovered. Also, there are situations in which use of Coast Guard aircraft by private entities requires reimbursement.

B.4.a. Reimbursement

Additional guidance on Reimbursement for Transportation is provided in [Appendix C](#), (excerpts from DHS Management Directive 0020.1 (series), Aviation Management and Safety).

B.4.b. Computing Reimbursable Charges

Standard personnel salaries and variable cost rates for the use of Coast Guard Aircraft change constantly. For the most up-to-date information the best source is the Commandant (CG-833) web site located on CG Central.

B.4.c. Policy Questions

Questions concerning reimbursement policy and standard rates should be referred to the Financial Policy Branch, Commandant (CG-84).

Section C. Authority to Approve, Direct and Initiate Flights

C.1. Area and District Commanders

Area and district commanders are delegated the authority under the DHS Management Directive, 0020.1 (series) to approve and direct flights in support of assigned missions (Mission Requirements Use). Assistant Commandant for Operations (ACO) is delegated the authority to approve and direct flights of headquarters units in support of assigned missions.

C.2. Commanding Officers of Units with Aircraft Assigned

All units that conduct aviation operations (e.g., air stations, squadrons, HITRON, Sectors, group/air stations or other aviation elements) will have an active duty Coast Guard aviator designated as the Commanding Officer responsible for carrying out the duties and responsibilities described in this manual. Commanding officers of units with aircraft assigned or commanding officers who have tactical control of aviation assets (e.g., SAR missions) are delegated the authority to initiate flights to meet assigned missions (Mission Requirements Use). This authority may be delegated to no lower than the operations officer

The flight schedule constitutes the Commanding Officer's authorization to initiate specific flights. Because of the significant responsibility inherent in this authority, flight schedule authority can be delegated no lower than the designated operations officer. In the absence of the designated operations officer, the flight schedule must be signed at a higher level in the air station chain of command. As an exception, flights may be initiated by a lower official when prior approval is not practicable (e.g., Search and Rescue (SAR) missions). Such flights shall be approved by a higher approval authority as soon as possible.

Commanding Officers are delegated the authority to approve and direct training flights, including those which remain overnight, as long as readiness requirements are maintained at the unit. Flights having a connotation of personal convenience or recreation are prohibited.

C.3. Transportation Flights

Transportation authority guidance is provided in [Chapter 5](#) for passengers and cargo. For situations not specifically covered in this manual, guidance and approval should be obtained from the appropriate District or Area Commander, via the chain of command. Requests for air transportation that cannot be resolved at these levels should be forwarded to Commandant (CG-711) by the concerned District or Area Commander.

Continued on next page

C.4. Flight Test Programs

Flight test programs to evaluate new equipment or aircraft configurations are prohibited without specific authorization from Commandant (CG-711). Maintenance test flights, which are authorized as discussed in [Chapter 4](#), are not to be confused with the flight test programs prohibited by this paragraph.

Aircraft modifications require close coordination between Commandant (CG-711), (CG-41), (CG-1131) and ARSC to ensure that airworthiness certification, flight clearance authorization and flight evaluations are completed in a safe and systematic manner. Flight Clearance authority resides with Commandant (CG-711), and participation of non-Coast Guard pilots and/or aircrew in developmental test and/or operational evaluation flights must be authorized in writing by Commandant (CG-711).

Prior to test flights when a USCG aviator will be flying with a non-USCG aviator (e.g., joint USCG/NAVAIR certification or joint USCG/Original Equipment Manufacturer test flights) a thorough preflight briefing will be completed covering airframe model specific differences, requisite flight test maneuvers, emergency procedures, checklists and CRM issues at a minimum. ARSC operations has a standard mission brief template which can be modified for these type missions. In addition, ARSC will sign an MOU with the agency participating in such joint test flight operations.

Section D. Personnel Authorized to Pilot Coast Guard Aircraft

D.1. Coast Guard Aviators

Except where permitted in Chapter 4, section N, of this manual, only Coast Guard aviators qualified in type and model or in training to become qualified in type and model are authorized to manipulate the controls and pilot Coast Guard manned and unmanned aircraft.

D.2. Other Military Aviators

In an emergency, an air unit commanding officer may assign a properly qualified aviator of another Service as a pilot in a Coast Guard aircraft without prior authorization. Any such assignment shall be reported by the Commanding Officer to Commandant (CG-711) via the chain of command. The command shall retain a description of the emergency conditions and an account of the circumstances leading to the assignment.

D.3. Civilian Contract Pilots

Commandant (CG-711) has authorized ARSC to employ qualified applicants as Civilian Contract Pilots (CCP) as long as they meet the employment prerequisites promulgated by Commandant (CG-711) for each airframe. Unless specifically noted otherwise, CCPs are subject to all provisions of this manual and may hold any pilot designation. CCP use is only authorized to support the following missions:

- Maintenance test flights; to include post PDM/PSI test flights, Functional Check Flights and Flight Verifications
- Logistical sorties in support of ARSC mission
- Ferry flights
- Proficiency, training and check flights

Operational and/or SAR mission use is not authorized.

Section E. Personnel Authorized to Command Coast Guard Aircraft

E.1. Authorized Command Personnel

A Coast Guard aircraft shall be flown only under the command of the pilot authorized to make the flight. Normally, authorization is granted by the Commanding Officer of the unit to which the aircraft is assigned. When a Coast Guard aircraft is temporarily located at another Coast Guard unit, the commanding officer of that unit may deviate from this requirement when the aircraft's use is deemed essential and fully qualified flight crew members are available. The commanding officer of the unit to which the aircraft is permanently assigned shall be advised of the aircraft's status and the estimated duration of the requirement.

E.2. Pilot in Command

The Pilot in Command (PIC) is defined as the pilot who has been assigned by proper authority to take charge of the aircraft and be responsible for a specific flight or mission.

Normally, the PIC is the senior pilot in the aircraft holding the highest designation in type and model. The PIC will signify acceptance of the aircraft by signing the Preflight Record. Omission of this act will not in itself nullify the status of the PIC.

If a flight must depart when a PIC has not been assigned, the senior pilot holding the designation of aircraft commander (AC) or first pilot (FP), in that order, shall be the PIC. If an Instructor Pilot or Flight Examiner is required for the primary mission, then the required Instructor Pilot or Flight Examiner shall be the PIC.

Pilot Designations	Pilot in Command
Both Pilots ACs*	Senior Pilot
One AC, One FP	AC Designated Pilot
Both Pilots FPs	Senior Pilot
* If one AC is a Contract Maintenance Pilot (CMP), the Coast Guard AC will be the PIC.	

E.3. Pilot in Command Authority and Responsibility

The PIC is responsible for the safe, orderly, efficient and effective performance of the aircraft and aircrew and passengers during the entire mission, whether it is a single sortie from home station or many sorties while deployed away from home station. This responsibility exists from the time the PIC first enters the aircraft with intent for flight, until leaving it upon completion of the mission.

In the case of UASs this responsibility exists from the time the PIC powers up the Ground Control Station (GCS) with the intent for flight, until the aircraft is safely on deck and powers down or is relieved of PIC duties while the UAS is airborne per paragraph E.3.c.(2) of this chapter.

Continued on next page

E.3.a. PIC Authority

To carry out this responsibility, the PIC has the authority to direct all aircraft and aircrew activities during the mission, including periods between sorties. The PIC has flight clearance authority as described in section F of this chapter as well as the authority to modify planned missions to provide for the safety of the crew and the airframe.

It is imperative that all members of the flight crew be aware of the PIC's identity and authority. The successful completion of the mission or the safety of the crew and aircraft may be jeopardized if any crew member doesn't know who is in command or fails to recognize the PIC's authority and act accordingly.

E.3.b. Exceptions

The authority and responsibility of the PIC of a Coast Guard aircraft are independent of rank or seniority in relation to other persons taking part in that flight, except as detailed in the following paragraphs.

E.3.b.(1) Commanding Officer

The commanding officer of a Coast Guard aviation unit, or other aviator in tactical command, retains full authority and responsibility regarding his or her command. This includes the flight in which the aviator in tactical command is participating.

NOTE

Aviator in tactical command is defined as a designated military aviator, senior to the PIC, in the aircraft's operational chain of command.

E.3.b.(2) Acting Aviator in Tactical Command

When the commanding officer or other aviator in tactical command assumes direct command of the aircraft, that officer assumes responsibility for the safe and orderly conduct of the flight. Any subsequent flight rule violations, mishap reports, or other actions arising from the flight will refer to that officer, the acting aviator in tactical command, as the PIC for the remainder of the flight.

E.3.c. Transfer of Pilot in Command Authority/Responsibility for Manned Aircraft

The authority and responsibility of the PIC of manned aircraft will not normally be transferred to another individual. A transfer of PIC authority and responsibility may be authorized only by the commanding officer of the unit to which the aircraft is attached, or by a higher authority within the unit's operational chain of command.

Deviations from this policy are authorized only as required by emergency or military necessity. The fact that the PIC of an aircraft may give up the actual physical control of the aircraft to another pilot does not alter the basic assignment of authority and responsibility for the flight. For a series of flights constituting one operation (e.g., ferry, deployment), the initially assigned PIC shall retain the authority and responsibility for the aircraft until the operation has been concluded.

Continued on next page

E.3.d. Transfer of Pilot in Command Authority/Responsibility for Unmanned Aircraft

The authority and responsibility of the PIC of unmanned aircraft may be transferred to another individual while the aircraft is airborne. A transfer of PIC authority and responsibility may be authorized only by the commanding officer of the unit to which the aircraft is attached, or by a higher authority within the unit's operational chain of command. Switching PIC duties while the UAS is airborne gives the Coast Guard the flexibility to extend on scene endurance capabilities. Comprehensive PIC airborne relief procedures must be followed and should include in-flight status briefings, mission status briefings and procedures for switching PIC authority and responsibilities between PICs.

E.4. Crew Member Status

The status and crew position assignment of each individual participating in a flight must be clearly understood by the entire aircrew before the flight. This information must also be specifically recorded on the crew list or passenger manifest for the flight. The senior crew member present in a separate compartment shall be clearly identified to the other crew members in that compartment.

E.5. Air Mission Commander

An Air Mission Commander (AMC) may be assigned when deemed necessary by the commanding officer for ASM missions utilizing more than one aircraft, or single aircraft Counter Drug Aviation Gunner (CD AG) operations. The AMC is normally the senior ranking AUF qualified Aircraft Commander assigned to the mission. The AMC is responsible for the overall effective and safe execution of the mission ensuring detailed preplanning, mission coordination and mission briefing are completed. The AMC has the authority to direct all aircraft and aircrew activities for the duration of the mission. Each aircraft PIC retains the authority and responsibilities for their assigned aircraft as stated in paragraph E.3.

Section F. Flight Clearance Authority for Coast Guard Aircraft

F.1. Clearance

Clearance, as used in this paragraph, is defined as military permission to execute a definite aircraft movement. It is not to be confused with Air Traffic Control clearance.

F.2. Basic Clearance

Clearance for flights of Coast Guard aircraft is based on the nature of the mission, condition of the aircraft and crew, and the actual/expected weather and other conditions at all points in the proposed flight.

F.2.a. Authority

Clearance authority for aircraft flights is granted to commanding officers of units with aircraft assigned and to the PIC for assigned missions. Commanding officers may delegate authority for clearance to officers under their commands. Clearance authority for Coast Guard aircraft operating from other military activities is normally retained by the Coast Guard through the PIC.

F.2.b. Restrictions

The commanding officer of a Coast Guard unit with aircraft assigned shall not permit a Coast Guard aircraft to depart when he or she believes the safety of the proposed flight is unduly jeopardized by the weather, condition of the aircraft or other known factors, or when such departure would constitute a violation of regulations.

F.2.c. Emergency Security Control of Air Traffic (ESCAT)

ESCAT is an emergency preparedness plan that prescribes the joint action to be taken by appropriate elements of the Department of Defense (DOD), the Department of Transportation (DOT) and the Department of Homeland Security (DHS) in the interests of national security. The plan defines the authorities, responsibilities, and procedures to identify and control air traffic within a specified air defense area during air defense emergencies, defense emergency, or national security conditions. Flight operations vital to national defense, as determined by appropriate military commanders, will be given priority over all other military and civil aircraft. Whether or not USCG aircraft are permitted to fly under ESCAT depends on the level of ESCAT imposed by the North American Aerospace Defense Command (NORAD) as defined under the ESCAT Air Traffic Priority List. In the event of ESCAT implementation, Commandant (CG-711) will coordinate with DOD, DOT, and DHS on behalf of the Coast Guard and disseminate operational guidance to units as soon as available. Units shall maintain a current copy of ESCAT in their operations center.

Continued on next page

F.2.d. Delay of Missions

The final decision to delay a mission may be made by either the commanding officer or PIC when, in the opinion of either individual, conditions are not safe to start or continue a mission.

Final responsibility for the safe conduct of the mission rests with the PIC. If the assigned PIC refuses a mission, it will not depart until that PIC is satisfied that conditions have improved or such necessary corrective actions have been taken that the mission can proceed safely. Another PIC and crew shall not be assigned to take the same mission under the same conditions without the specific approval of the Commanding Officer. This authority may not be delegated. Due consideration must be given to the urgency of the mission and the new crew's ability to proceed safely on the mission under the existing conditions before a change in PIC and crew may be approved.

F.3. Clearance for Malfunctioning or Damaged Aircraft

F.3.a. Inspection

If a precautionary landing is made away from home station for observed or suspected aircraft malfunctions or damage, the PIC shall ensure that a proper inspection of the aircraft is conducted by competent maintenance personnel and the results reported to the home station's engineering officer or other qualified maintenance officer.

Further flight without the approval of the appropriate clearance authority, as given in paragraphs F.3.b. and F.3.c., is prohibited.

F.3.b. Minor Malfunctions and Non-Structural or Cosmetic Damage

If the engineering officer or other qualified maintenance officer has evaluated the reported malfunction to be minor and not a threat to the safety of the crew or aircraft, the Commanding Officer may clear the aircraft for further flight. If the aircraft has been damaged and the engineering officer or other qualified maintenance officer has evaluated the damage to be non-structural or cosmetic, the Commanding Officer may clear the aircraft for further flight.

Only in the most unusual circumstances should the aircraft be cleared for further flight without the specific approval of the Commanding Officer.

F.3.c. Major Malfunctions and Actual or Suspected Structural Damage

If major malfunctions or structural damage is found or suspected and further flight is required, the Commanding Officer or his/her representative will brief Commandant (CG-711) and Commandant (CG-41) on the extent of the damage and recommended action. Commandant (CG-711), with technical concurrence from Commandant (CG-41), will be the clearance authority for further flights of aircraft with actual or suspected structural damage.

Continued on next page

F.4. Clearance for Aircraft Operating in the National Capital Region

F.4.a. General Restrictions

Due to security considerations, the FAA has established two Temporary Flight Restriction (TFR) zones around the National Capital Region (NCR). The outer ring is the Metropolitan Area Air Defense Zone (ADIZ). It radiates from the NCR to approximately 30 miles out. The inner ring is the Metropolitan Area Flight Restricted Zone (FRZ). It radiates from the NCR to approximately 10 miles out. Pilots are reminded to remain vigilant in their preflight planning as NCR airspace procedures and restrictions for Homeland Security are very dynamic.

F.4.b. Metropolitan Area ADIZ Clearance

All Coast Guard aircraft may operate in the Metropolitan Area ADIZ subject to current ADIZ NOTAM restrictions and requirements. Prior permission from Commandant (CG-711) to operate in the ADIZ is not required.

F.4.c. Metropolitan Area FRZ Clearance

The following Coast Guard aircraft have been authorized to operate in the FRZ, subject to FRZ NOTAM restrictions and requirements. Special procedures apply:

- Aircraft assigned to CGAS Washington or aircraft in direct support of the CGAS Washington mission when its aircraft are grounded for maintenance.
- Aircraft in direct support of the National Capital Region Air Defense (NCRAD) mission.
- Aircraft engaged in Ports, Waterways and Coastal Security patrols.

NOTE

Coast Guard Auxiliary aircraft are prohibited from entering the FRZ.

F.4.d. Landing within the ADIZ

Coast Guard aircraft may land at locations within the ADIZ without Commandant (CG-711) approval.

F.4.e. Landing within the FRZ

Only aircraft assigned to CGAS Washington, aircraft in direct support of the CGAS Washington mission when its aircraft are grounded for maintenance, and those aircraft in direct support of the National Capital Region Air Defense (NCRAD) mission may land at Ronald Reagan National Airport. Aircraft flown in support of Continuity of Operations (COOP) may land at predesignated fields and landing zones or as directed by Commander, Atlantic Area. Pilots intending to land at any other location within the FRZ shall contact Commandant (CG-711) prior to flight.

This Page Intentionally Left Blank

Chapter 3

FLIGHT AND MISSION PLANNING

Introduction

This chapter provides guidance for conducting flight and mission planning for Coast Guard aircraft. It is intended to supplement other applicable Coast Guard directives, such as Federal Aviation Regulations (FAR) parts 97 and 93, Joint FAA/Military documents, DOD publications, and Aircraft Flight Manuals. Requests for deviation from the provisions of this chapter shall be forwarded to Commandant (CG-711) for approval.

In this chapter

This chapter is divided into four sections:

- Mission Planning
 - Flight Planning Procedures
 - Flight Planning — Aircrew
 - Flight Planning — Weather
-

Section A. Mission Planning

A.1. Overview

Many factors must be considered in planning an aviation mission. Weather, airspace clearances, recovery bases, flight plans, and aircraft performance data are just a few. Some can be modified to suit the missions, and some, like the weather, are factors over which one has no control. Because of the complex interrelationship among planning factors, it is best to involve aviators in the operational planning.

Mission planners should provide aviators with prioritized objectives, then let them determine how best to use the aviation assets to meet the objectives. Aircraft characteristics are discussed in [Appendix B](#).

A.2. Fuel

Fuel is one of the most important considerations in aviation planning. Coast Guard aircraft are turbine powered and have some flexibility in the fuel that can be used. JP-4, 5, and 8, as well as Jet A, A1, and B, are all suitable fuels for turbine engines. Because of critical weight considerations, aircraft do not carry maximum fuel for every flight. The standard fuel load for each Coast Guard aircraft varies from air station to air station, depending on mission requirements.

Fuel management must also be considered during mission planning. Flying at maximum speed for rapid response consumes more fuel and reduces on-scene endurance. More fuel will extend endurance, but may limit load-carrying capability. A fuel load can be tailored for a specific flight, but changing a fuel load can delay a short notice launch between 15 and 60 minutes.

A.2.a. Fuel Availability

When planning operations where aircraft will be staged from a forward location or must refuel en route to the final destination, mission planners must ensure that suitable fuel in sufficient quantity will be available at the forward base of operations or airports along the route to meet mission requirements. To control cost, fuel should be purchased at DOD bases or at commercial facilities with a DOD fuel contract whenever possible.

It can generally be assumed that large military and commercial facilities will be able to meet the mission's fuel requirements with no special preparations beyond those of normal flight planning. Where airport facilities are adequate, but fuel is not available, refueling from an C-130 may also be a suitable option. Planning for fuel availability can become especially critical when aircraft will be required to operate in remote locations and special advance arrangements may be required.

Continued on next page

A.2.b. Other Fueling Options

Some procedures, such as Helicopter In-Flight Refueling (HIFR), can extend the range and/or endurance of helicopters within the constraints discussed in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST 3710.2 (series).

Situations may arise at remote locations when fixed wing to helo ground refueling is required. The C-130 has the capability to refuel both the H-60 and H-65. This procedure involves multiple aircraft types and aircrew members from different communities. Therefore it is essential that flight manual procedures be followed to minimize mishap potential.

Other procedures, such as “hot refueling,” can minimize the time required to replenish an aircraft between sorties. These techniques involve an element of risk and cannot be applied in every situation. Each pilot in command (PIC) retains final approval authority about the suitability of using these procedures.

A.3. Aircrew

Mission planners need to consider when to alert aircrews of a possible launch and whether augmented or double crews will be required for mission accomplishment. Frequent “false” alerts are distracting and time consuming, but advance notice of a mission can substantially aid the aircrew in making preparations and accomplishing the mission. Mission planners need to carefully weigh these conflicting aspects of alerting.

A.3.a. Alerting

When it becomes apparent that the launch of an aircraft may be required, consideration should be given to alerting the aircrew of that possibility and brief them about the probable nature of the mission. Time of day, unusual mission related information, or the need to discuss mission requirements are factors in considering alerting an aircrew.

It is usually not necessary to wait until all the relevant information is received before the aircrew can start preparations for the mission. Providing aviators early notification gives them time to accomplish some of the necessary flight planning in advance and to configure the aircraft for the mission.

Adding fuel to increase endurance or removing fuel to enable the aircraft to carry extra passengers or cargo are examples of things that might be done to prepare an aircraft for a specific mission.

Continued on next page

A.3.b. Crewing

Each aircraft type has a minimum crew requirement depending on the nature and difficulty of the mission and prevailing conditions.

If an aircraft is to be staged far from its home base, the number of pilots and crew may need to be increased to ensure both crew rest and mission requirements can be met. For example, if an aircraft must first fly a long distance and then be pressed immediately into service, a double crew may be required: one to fly the aircraft to the forward location and one to fly the aircraft on the mission. Similarly, if an aircraft must operate for long periods each day on an extended deployment, a double crew may be required.

Sometimes crew rest and mission requirements can be met by augmenting an aircrew with an extra pilot or other crew members rather than by sending a complete second aircrew. Minimum crew assignments, flight scheduling standards, and crew rest requirements are provided in section C, but the aviators responsible for flying the mission should be consulted regarding the best way to balance crew rest and mission requirements.

A.4. Environment

Besides fuel, other factors such as weather, temperature, air density, icing potential, turbulence, aircraft weight and configuration, runway conditions, etc., affect the performance capabilities of an aircraft. They influence the weight of the payload an aircraft can carry, the distance it can fly (range), the length of time it can stay airborne (endurance), the speed at which it can fly, and, for helicopters, whether hovering and hoisting can be accomplished.

Under some circumstances, environmental conditions may eliminate the option of using an aircraft for a mission. The effects of these factors are complex and dynamic, and they vary for each type of aircraft. During the planning stage, mission or operations planners who are not aviators should consult with the aviators who will be performing the mission.

A.5. Risk Management

Managing the actual operation of an aircraft involves several trade-offs.

A.5.a. Emergencies

Pilots are taught to anticipate emergencies. A good pilot always has a plan in mind for what he or she will do if a critical component fails. For example, helicopter pilots minimize the time they must hover directly over a boat so they have a clear area to ditch if a serious engine malfunction should occur. Multi-engine airplane pilots plan every takeoff so it can be made safely, even if the most critical engine should fail at the least opportune moment.

A.5.b. Mission Modification

Because of the dynamic and complex nature of flight operations, pilots receive both the authority and responsibility to modify planned missions to provide for the safety of the crew and the airframe. Coast Guard pilots are trained to constantly assess risk, mission goals, probability of success, and their own abilities when making critical aviation decisions. This process is aimed at achieving the highest level of customer satisfaction while minimizing the possibility of personnel injury or damage to expensive capital assets.

Special use airspace (e.g., warning areas), can impact the execution of missions, particularly those that are routine or lower priority. Advance coordination with agencies that control such airspace is vital to ensure effective mission accomplishment.

Section B. Flight Planning Procedures

B.1. Requirements for Flight Plans

The pilot in command (PIC) of a Coast Guard aircraft should file a written or computerized flight plan prior to each flight, except when departing on an urgent SAR, Law Enforcement (LE), or Home Land Security (HLS) missions.

B.1.a. Approved Forms

The FAA and DOD accept the following flight plan forms and are approved for Coast Guard use:

- Military Flight Plan (DD Form 175)
- DOT-FAA Flight Plan (FAA Form 7233-1)
- DOD International Flight Plan (DD Form 1801)
- ICAO Flight Plan (Form 7233-4)

B.1.b. Local Flights

Within Electronic Aircraft Logbook (EAL), the Preflight & Service Record Review page, utilize the Local Clearance "Route of Flight" section of the Preflight Record for visual flight rules (VFR) flights scheduled to return to the flight's point of origin. Local Flight Clearance (Part I, CG-4377) may be substituted if required due to EAL malfunctions.

B.1.c. En route Stops

Flights making en route stops need not file a new Flight Plan or Local Flight Clearance form if all of the following criteria are met:

- Intermediate stops are entered, in order of intended landing, on the flight plan filed at the original point of departure
 - Personnel to be picked up or discharged are either noted on the original flight plan or on a current passenger manifest that is left at each intermediate stop
 - The pilot in command remains unchanged
-

B.1.d. Group Movements

One flight plan may be filed for a group of aircraft proceeding as a unit under visual meteorological conditions (VMC). Group flights under instrument meteorological conditions (IMC) by Coast Guard aircraft are not authorized.

Units authorized to conduct Tactical Vertical Insertion (TVI) operations are authorized group movement in Instrument Meteorological Conditions (IMC) under a Special Visual Flight Rules (SVFR) clearance, when engaged in operational missions. In addition to standard FAR part 91 helicopter SVFR requirements, forecast visibility must be at least 1/4 mile along the entire route to be flown.

B.1.e. Standard Practice

Flights of Coast Guard aircraft shall be conducted in accordance with instrument flight rules (IFR), whenever practicable.

Continued on next page

B.2. Preparing and Filing Flight Plans

B.2.a. DD Form 175

Instructions for completing DD Form 175 are contained in DOD flight information publications. The authority clearing the flight shall sign in the space provided on DD Form 175.

B.2.b. FAA Form 7233-1

When using FAA Form 7233-1, the signature of the pilot shall be included with the pilot identification information. Unless documented elsewhere, a list of the aircraft occupants shall be written on the reverse side of the form or attached to the form.

B.2.c. Unavailability of Military Flight Clearance

On flights originating from airfields without a military flight clearance capability, flight plans shall be filed as prescribed in the Aeronautical Information Manual (AIM) or other applicable publication.

B.2.d. Copies

A copy of each filed flight plan shall be left with base operations, the airport manager, or other responsible person at the point of departure. Copies filed at Coast Guard air units shall be retained for 90 days.

B.3. Weather Briefing Requirements

Weather is an extremely important safety factor in the planning and conduct of flight operations. Paragraphs B.3.a. through B.3.d. of this chapter describe the weather information a PIC must obtain before each flight along with certain record keeping requirements. Section D of this chapter contains information about minimum weather requirements for takeoffs, landings and other aspects of aircraft operations.

B.3.a. General

An aviation weather briefing shall be obtained before all flights. If a weather briefing cannot be obtained prior to departure and the weather conditions are at or above the minimums required for departure, the flight may proceed. The PIC shall contact an appropriate facility for weather information as soon as practicable after takeoff.

B.3.b. Weather Clearance

Weather information entered on aircraft clearance forms shall be supplied by qualified meteorological personnel when such personnel are available. Commanding officers may authorize, in writing, Marine Science Technicians who are graduates of an approved weather briefing school, and who are considered qualified, to prepare and sign flight weather briefing forms.

NOTE

It must be understood that Marine Science Technicians are most likely not qualified forecasters and should only be expected to brief the flight crews using information and forecasts obtained from other sources.

Continued on next page

B.3.c. IFR Flights

Prior to an IFR flight, a comprehensive weather briefing shall be obtained. This weather briefing shall include all items (applicable to the route of flight) contained in a "Standard Briefing" as defined in the AIM.

Except when using an FAA Form 7233-1 Flight Plan, the weather briefing shall be recorded on a DD Form 175-1.

When using the FAA Form 7233-1, the weather briefing may be recorded on the reverse side of the form or on a separate page attached to the form.

- When using a DD Form 175-1, it shall be completed and signed by a qualified weather briefer when available. If a weather briefing is received other than in person, the PIC shall complete all sections of the DD Form 175-1 and include the initials of the person conducting the briefing.
 - Acceptable sources of data for weather information include the Internet, weather subscription services, teletypes, or other displays.
-

B.3.d. VFR Flights

On VFR flights, a weather briefing must be obtained, though it need not be recorded.

B.4. Fuel Reserve Requirements

Federal Aviation Regulations (FARs) require all aircraft to depart with sufficient fuel to reach the destination or alternate with a fuel reserve still on board. The size of the fuel reserve varies with the length of time an aircraft is airborne and the weather conditions at the intended point of landing. The reserves can be as little as 20 minutes of fuel for helicopters and 45 minutes for fixed wing (F/W) aircraft under perfect weather conditions or, they can be several hours' worth of fuel if the aircraft must make contingent plans for diverting to an alternate airfield due to bad weather at the intended destination. Fuel carried on departure will be at least ten (10) percent more than that required to reach the alternate airfield via the destination.

In no case will this reserve fuel be less than that required for 45 minutes of flight after reaching the alternate (for F/W aircraft) or 20 minutes of flight after reaching the alternate (for rotary wing (R/W) aircraft).

Meteorological factors, mission requirements, and any known or expected traffic delays shall be considered when computing fuel reserves. Additional fuel reserve requirements, in lieu of a destination alternate for remote locations, are discussed in paragraph D.3. of this chapter.

B.5. Foreign Clearance Procedures

Procedures for obtaining required clearances and conducting flight operations within foreign airspace are contained in the Department of Defense Foreign Clearance Guide (DOD 4500.54-G). It is imperative that these procedures be followed before any Coast Guard aircraft enters foreign airspace. The PIC must confirm that Foreign Clearances have been obtained, even when another entity is responsible for this function.

Continued on next page

B.6. Passenger Manifest Requirements

Before any flight, the PIC shall file a copy of an accurate crew and passenger list with a responsible person, showing name, grade, and Service (if military), duty station, and status aboard the aircraft (passenger or crew). On an urgent SAR or LE mission, this may be accomplished by radio. Where it is not possible to leave the crew and passenger list with someone on the ground, such as in a rescue of survivors from an isolated location, an appropriate ground radio station shall be advised of the personnel on board as soon as possible.

B.6.a. Recording Manifests

Manifests may be written on the reverse side of the flight plan or on a passenger manifest form.

B.6.b. Retention

Passenger manifests shall be retained by the home unit with the aircraft flight record.

B.7. Weight and Balance Control

B.7.a. PIC Certification

With the signing of a flight plan, the PIC certifies that a weight and balance form has been completed that represents the actual loading of the aircraft. A copy of the completed weight and balance form shall be submitted with the completed flight plan except when a unit has completed a standard loading weight and balance form within the last twelve months, and the aircraft is loaded in accordance with that standard loading. If the aircraft is away from its home station, a copy of the weight and balance form shall be left with the responsible individual on the ground.

An annual inventory shall be conducted of all station aircraft in accordance with the Weight and Balance Process Guide, (CGTO PG-85-00-180).

B.7.b. Retention

Original weight and balance forms shall be retained for 90 days by the aircraft's home unit.

B.8. Closing Out Flight Plans

The PIC is responsible for ensuring that the flight plan is properly closed out.

B.8.a. Military Installations

For flights terminating at military installations, the PIC should verbally confirm flight plan closing with Tower or Base Operations personnel.

B.8.b. Non-Military Installations

For flights terminating at nonmilitary installations, the PIC should close the flight plan with the appropriate air traffic control agency by any available means of communication.

B.8.c. Remote Airfields

When communication facilities do not exist at the destination, the PIC may, within five minutes before landing, transmit the predicted landing time to a communications facility for relay to the appropriate air traffic control agency to close out the flight plan.

Section C. Flight Planning — Aircrew

C.1. Minimum Pilot Assignment Requirements

The minimum pilot assignment requirements for operation of Coast Guard aircraft are described in the following paragraphs. All pilots must be qualified in type except as noted. An Aircraft Commander (AC) shall be assigned as the PIC of aircraft on difficult or unusual missions, and on flights scheduled to carry passengers. Special limitations apply to pilots on DIFPRO orders (see Chapter 8, section E).

C.1.a. All Aircraft Except SRR Helicopters and Single Pilot Fixed Wing Aircraft

C.1.a.(1) Normal Flights

Either of the following is required to meet minimum pilot assignment requirements:

- An AC and a copilot (CP)
 - Two First Pilots (FPs)
-

C.1.a.(2) Training Flights

The minimum pilot assignment requirements for training flights are the same as those for normal flights with the following exceptions:

- For flights during an approved pilot qualification syllabus under VMC, the student need not hold a CP designation.
 - For training flights other than pilot instruction, under daylight VMC, an FP and a CP may be assigned together. The FP shall neither relinquish the pilot's seat to the CP, except in an emergency, nor relinquish control of the aircraft when at an absolute altitude below 500 feet.
 - Special authorization for Aviation Training Center instructors to conduct training flights under IMC with student pilots not yet qualified as CPs is provided in paragraph C.1.c.
-

C.1.a.(3) Maintenance Flights

An AC and an FP are required. A commanding officer may authorize a CP in lieu of the FP for deployed aircraft. When practicable, an aeronautical engineering officer should be assigned to test flights of unit aircraft; however, it is not necessary for the aeronautical engineering officer to be the PIC.

For further guidance and restrictions on aircrew assignments for maintenance flights, see Chapter 4, section L.

C.1.a.(4) Ferry Flights

For ferry flight, the minimum required pilot assignment consists of an AC and a CP.

C.1.b. SRR Helicopters and Single Pilot Fixed Wing Aircraft

Continued on next page

C.1.b.(1) Normal Flights

One of the following is required to meet minimum pilot assignment requirements:

- Under daylight VMC, an AC or an FP is the minimum required.
- Under night VMC, the minimum requirement is an AC and a CP or two FPs, except when mission urgency dictates, an AC alone may be authorized by the Commanding Officer. This authority may not be delegated.
- Under IMC, an AC and a CP, or two FPs, are required.

C.1.b.(2) Training Flights

For training flights, the minimum pilot assignment requirements are:

- Under daylight VMC — A CP, but only when engaged in an upgrade syllabus flight as part of that syllabus
- Under night VMC — One of the following minimum pilot assignments is required:

An AC and a student pilot engaged in syllabus instruction.

An AC when the Commanding Officer determines that adequate light is available to provide visual reference.

Special authorization for Aviation Training Center instructors to conduct training flights under IMC with student pilots not yet qualified as CPs is provided in paragraph C.1.c.

C.1.b.(3) Maintenance Flights

For all SRR helicopters, an AC is required. When practicable, an aeronautical engineering officer should be assigned to test flights of unit aircraft, however, it is not necessary for the aeronautical engineering officer to be the PIC.

For further guidance and restrictions on aircrew assignments for maintenance flights, see Chapter 4, section L.

C.1.b.(4) Ferry Flights

For ferry flights, at least an AC and a CP are required.

The Commanding Officer may authorize a single pilot SRR ferry flight in day VMC if the mission is conducted within the unit's AOR or point to point on one sortie. The PIC must be AC qualified and current in the model (A, B, C, etc.) of the aircraft.

C.1.c. Special Authorization for Aviation Training Center

Flight under instrument conditions may be conducted by Training Division (TRADIV) instructors and students engaged in a pilot training syllabus provided that each airport where flight operations are to be conducted has a ceiling of 500 feet or better and visibility of at least one mile, or meets approach minimums, whichever is higher.

C.1.d. Single Pilot Fixed Wing Aircraft

Single pilot F/W aircraft may be flown by a student pilot who has been designated "safe for solo" by the unit Commanding Officer.

Continued on next page

C.1.e. Airborne Use of
Force Flights

For Basic Vertical Insertion (BVI) flights:

- Training flights — 2 pilots, at least one BVI qualified
- Operational flights — 2 pilots, at least one BVI qualified

For Advanced Vertical Insertion (AVI) flights:

- Training flights — 2 pilots, both AVI instructor pilots or one AVI instructor pilot and one under instruction in AVI upgrade syllabus
- Operational flights — 2 pilots, both AVI qualified

For Tactical Vertical Insertion (TVI) flights:

- Training flights — 2 pilots, both TVI instructor pilots or one TVI instructor pilot and one under instruction in TVI upgrade syllabus
- Operational flights — 2 pilots, both TVI qualified

For Rotary Wing Air Intercept (RWAI) flights:

- Training flights — 2 pilots, both RWAI qualified or one RWAI qualified and one under instruction in RWAI upgrade syllabus
- Operational flights — 2 pilots, both RWAI qualified

**C.2. Minimum
Aircrew
Assignment
Requirements**

Table 3-1 prescribes the minimum aircrew required in addition to the minimum pilot requirements described in paragraph C.1. for Coast Guard aircraft/missions. Commanding officers or PICs may require additional personnel or someone with a higher designation based on unit or mission needs.

For aircraft types and missions not indicated, minimum crew requirements will be prescribed by the Commandant (CG-711). The minimum crew described in the flight manual is defined as the minimum number of persons required to operate the aircraft safely.

Continued on next page

Table 3-1

MINIMUM AIRCREW ASSIGNMENT REQUIREMENTS (IN ADDITION TO MINIMUM PILOT REQUIREMENTS)													
TYPE	MISSION	MINIMUM AIRCREW											
		AG	AV	BA	DM	FE	FM	RS	LM	N	R	SSO	TSO
H-60	SAR						•	• (1)					
	Unarmed Patrol						• (2)	• (1)					
	Armed Patrol/ AVI Cover	• (3)		•									
	MSRT/TVI/Lift	• (6)					• (4)						
	BVI/Lift	• (3) (8)					• (5)						
	Log/Pax/Trng Maint/Ferry			•									
	RWAI			•									
H-65	SAR						•	• (1)					
	Unarmed Patrol						• (2)	• (1)					
	Armed Patrol/AVI Cover	• (3)		•									
	RWAI			•									
	Counter Drug	• (7)											
	MSRT Escort	• (7)											
	Armed Patrol	•		•									
Log/Pax/Trng Maint/Ferry			•										

Continued on next page

TYPE	MISSION	MINIMUM AIRCREW											
		AG	AV	BA	DM	FE	FM	RS	LM	N	R	SSO	TSO
MH-68	Counter Drug	• (7)											
	MSRT Escort	• (7)											
	Armed Patrol	• (7)											
	Log/Pax/Trng Maint/Ferry			• (13)									
C-130H	SAR/Patrol/ CASPER Sensor			•(16)	•(16)	•			• (9)	•	•		
	Augmented SAR/ Patrol			•	• +1	• +1				• +1	•(15)		
	Log/Pax					•			• (10)	• (14)	•(18)		
	Maint/Trng/Ferry			•		•				• (14)			
	CASPER Tactical					•				•	•	• (17)	•
C-130J	Log/Pax						• (11)		•				
	Maint/Trng/Ferry			•			• (11)						
HU-25	SAR			•	•							•	
	Patrol			• (12)	• (12)							•	
	MEDEVAC			•								•	
	Log/Pax/Trng Maint/Ferry									• (10)		•	

Continued on next page

(1)	Requirement for Rescue Swimmer (RS) may be waived at CO's discretion.
(2)	Requirement for Flight Mechanic (FM) may be waived at CO's discretion and a BA substituted for day or night missions that do not involve Rescue Swimmer (RS) operations. A Hoist Qualified Basic Aircrew member (HQBA) may be substituted on day only missions that do not involve RS operations.
(3)	Must be appropriately qualified for mission (Ports, Waterways, and Coastal Security (PWCS) Aviation Gunner (AG)
(4)	Must be TVI qualified.
(5)	Must be appropriately qualified for mission (BVI or AVI).
(6)	Must be Counterterrorism AG qualified. Not applicable if escorted by another aircraft with a Counterterrorism AG on board.
(7)	Must be Counter Drug (AG) qualified.
(8)	AG requirement for AVI only. AG requirement may be waived at CO's discretion if the escort helicopter is armed and has qualified PWCS AG aboard.
(9)	Loadmaster (LM) required for MEDEVAC missions only.
(10)	For C-130 Pax missions, 1 LM plus 1 BA.
(11)	This term flight mechanic refers to the type used for C-130J OPS not a rotary wing flight mechanic.
(12)	Requirement for the Basic Aircrew (BA) and Dropmaster (DM) may be waived at CO's discretion.
(13)	Refer to HITRON Organization Manual for Commandant (CG-711) approved exceptions.
(14)	A Navigator shall be assigned to all flights that will:
	Encounter Instrument Meteorological Conditions (IMC).
	Conduct any portion of the flight on an IFR flight plan.
	Use area navigation (INS and/or GPS) as primary flight path guidance.
	Be flown at night (sunset to sunrise).
	Conduct aerial deliveries.
	Conduct a full acceptance or annual functional check flight IAW CGTO 1C-130-6CF.
(15)	One additional pilot is required (2 AC+ CP or FP) or (1 AC + 2 FP). Maximum crew scheduling standards still apply; however, individual flight time and crew mission time (see "deadheading" note in paragraph C.3.a. of this manual) can be extended to accommodate the maximum endurance capability of the HC-130 (14+ flight hours) with proper crew rotation.
(16)	For CASPER Sensor (SSO only), CASPER qualified BA or DM will as act as SSO.
(17)	For CASPER Tactical (SSO and TSO), CASPER qualified DM will as act as SSO.
(18)	Radio position only required if NAV not utilized in those cases when note 14 can be complied with.

Continued on next page

C.3. Crew Utilization**C.3.a. Maximum Utilization Factors For Aircrews**

Uniform aircrew utilization standards are necessary to help reduce fatigue as a factor contributing to aircraft mishaps. The standards are not intended to unduly restrict operational commanders when urgent operations are required; exceptions may be made by cognizant commanders as authorized in this section. The standards cannot cover every situation that will arise; the command must determine the best course to follow in accomplishing certain urgent missions.

Conformance with the spirit of these standards is necessary if chronic and acute fatigue is to be reduced. Commanding officers may establish more stringent comprehensive requirements after taking into account the variety of conditions that affect their units such as, but not limited to, mission, BRAVO-ZERO requirements, predominant weather, terrain, geographic location, individual pilot experience, use of sensors, and mission time of day. The spirit of these standards is to ensure that flight crews are well rested, alert, and capable of performing their duties safely. Although ground duties not related to a specific sortie are not counted as crew mission time, they must be considered in crew scheduling.

C.3.a.(1) Flight Scheduling Standards

Within any 24 consecutive hours, a flight crew member should not be scheduled to exceed the hourly limits shown in table 3-2. Flights which are scheduled for the maximum time allowed should not be extended except for urgent mission requirements.

NOTE

A new 24-hour period will begin any time a flight crew or non-crew member has completed ten hours rest, regardless of duty status. However, deadhead time shall not be calculated as part of rest time.

Continued on next page

Table 3–2

FLIGHT SCHEDULING STANDARDS		
Mission	Individual Flight Time	Crew Mission Hours (CMH)
R/W Single-Pilot	6	12
R/W Multi-Pilot	8	12
F/W Unpressurized	8	12
F/W Pressurized (except HU-25)	12	16
HU-25	10	14
R/W Multi-Pilot (CBRN-E)	3	6
F/W Pressurized (CBRN-E)	4	8
VUAV (Eagle Eye)	6	12
MALE/HALE UASs	10	14

C.3.a.(2) Rest Requirements

After a flight in which accumulated times total those in table 3-3, a crew member shall be required to take no less than the indicated number of off-duty hours before being assigned as an aircrew member. These rest requirements shall be applied whenever an aircraft is safely on the ground or flight deck, regardless of engine or rotor operation or intent for further flight. (See paragraph C.3.a.(4) of this chapter for exceptions.)

Table 3–3

REST REQUIREMENTS				
Fixed Wing/MALE UAS/HALE UAS		Rotary Wing/Single Pilot Fixed Wing/VUAS		Hours Off Duty
Individual Flight Time	Crew Mission Time	Individual Flight Time	Crew Mission Hours (CMH)	
8.0–9.9	12.0-12.9	6.0-6.9	10.0-10.9	10 (12)*
10.0–11.9	13.0-14.9	7.0-7.9	11.0-11.9	12 (18)*
12.0+	15.0+	8.0+	12.0+	15 (24)*
Off duty time must be such that it allows a minimum of 8 hours of bed rest.				
Alternate Off Duty Standards (*) are to be used if the individual flight time (IFT) or crew mission time (CMT) values in table 3-3 are achieved for two or more consecutive days.				
For single pilot F/W ferry and R/W ferry operations, use F/W standards.				

Continued on next page

NOTE

Individual flight time (IFT) and crew mission time (CMT), listed in table 3-3, are cumulative unless 10 hours of rest are completed between sorties, regardless of duty status. If adequate crew rest facilities are not available between multiple sorties, crew mission time shall continue to accrue.

NOTE

One half of the number of flight hours spent deadheading shall count as crew mission time. Deadheading shall not be calculated as part of crew rest time.

NOTE

An aircraft may continue flight operations so long as no member of the minimum crew required for the mission exceeds the IFT or CMT limits and each has met the minimum rest requirements listed in table 3-3. Each member of the crew must also comply with the additional requirements and standards in paragraph C.3.c.(3).

C.3.a.(3) Additional Requirements and Standards

C.3.a.(3)[a] Flight Hours

A flight crew member shall be relieved from all duty (including collateral duties) for not less than 24 consecutive hours at least once during any eight consecutive days (192 hours).

For example, a crew which commences duty status at 1600 on Wednesday must be relieved from all duty for at least 24 consecutive hours commencing no later than 1600 on the following Wednesday. A crew member who is deployed may remain in a duty status indefinitely, provided he or she has not exceeded an average of four flight hours per day for the previous seven days (including days prior to deployment) and has not exceeded IFT or CMT in table 3-3. If, when deployed, the flight hours or crew mission time in table 3-3 on any given day are exceeded, the respective "HOURS OFF DUTY" standards apply. When deployed, if the average flight hours per day exceed four, then the crew members shall be relieved from all duty for not less than 24 hours.

C.3.a.(3)[b] Reverse Cycle Operations

Unless a flight crew member has night adapted, the member may not be scheduled for more than two consecutive nights of reverse cycle operations. The Flight Scheduling Standards and Rest Requirements of tables 3-2 and 3-3 apply to reverse cycle operations. Reverse cycle operating procedures and guidelines as outlined in [Appendix D](#) apply to UAS flight crew members.

C.3.a.(3)[c] Seven Consecutive Days

A flight crew member shall not fly as a crew member more than 50 hours in any seven consecutive days.

C.3.a.(3)[d] Thirty Consecutive Days

A flight crew member shall not fly as a crew member more than 125 hours during any 30 consecutive days.

Continued on next page

C.3.a.(3)[e] 365
Consecutive Days

A flight crew member shall not fly as a crew member more than 1100 total military/civilian hours during any 365 consecutive days.

C.3.a.(3)[f] Alert Duty

Flight crew members shall not be assigned alert duty for more than 24 consecutive hours; they should have at least 10 hours off duty immediately before assuming alert duty. Alert duty is limited to 12 hours unless adequate crew rest facilities are available.

C.3.a.(3)[g] Strip Alert

Flight crew members shall not be assigned strip alert for more than 12 consecutive hours (with adequate crew rest facilities) or eight consecutive hours (without adequate crew rest facilities). They should have at least 10 hours off duty immediately before assuming strip alert duty.

C.3.a.(3)[h] Cross-
decking AVDETS

The decision to move AVDETS between cutters should be carefully weighed against all mission requirements, logistical concerns, and crew fatigue. Area commands shall be notified anytime the movement of AVDETS between cutters will extend their consecutive days at sea beyond 30 days.

C.3.a.(4) Exceptions

C.3.a.(4)[a] SAR
Missions

For SAR missions in which saving life is probable, the standards, limits and requirements of paragraph C.3.a. of this chapter may be waived by Commanding Officers on a calculated risk basis. This authority may not be delegated. It should be understood that flight safety will be affected with an attendant rise in mishap potential. Cognizant operational commanders shall be advised of the situation and action taken.

C.3.a.(4)[b] Other
Missions

For other missions, only commanding officers of aviation units are authorized to waive the requirements of the paragraph C.3.a. of this chapter to move an aircraft or a deadheading flight crew to or from a staging area. This authority may not be delegated. The physical condition of the flight crew and the operational situation may indicate this as the best course of action. Where an exceptional operational requirement exists, the Commanding Officer may initiate the waiver on a calculated risk basis. Otherwise, a request for a waiver shall originate only from the pilot in command.

C.3.a.(4)[c] Required
Excess

When the tempo of operations requires individual flight time in excess of the guidelines in paragraph C.3.a.(3) of this chapter, flight personnel shall be closely monitored and specifically cleared by the Commanding Officer on the advice of a flight surgeon.

C.3.b. Responsibility of
Flight Crew Members

The preceding standards impose limits upon operational commanders in order to improve mental and physical readiness of flight personnel. Individual benefits derived depend upon the proper use of off duty time to ensure good mental and physical condition.

It is the moral and military responsibility of each flight crew member to engage only in those off duty activities that will allow the crew member to report to

Continued on next page

duty fully rested. It is impossible for the Commanding Officer or cognizant department head to be aware of how crew members use off duty time.

All flight crew members shall be made aware of these provisions. It is the responsibility of the individual flight crew member to advise the operations officer whenever he or she is approaching, or has reached, the prescribed limits.

**C.3.c. Command
Responsibility**

It is emphasized that the prescribed limits are necessary in the interest of safer Coast Guard air operations. More conservative limits may and should be imposed at all command levels when deemed advisable. As these limits are approached, time available for ground duties necessarily will be reduced. Such consequences must be anticipated and accepted during periods of heavy flight activity.

**C.4. Exogenous
Factors**

Aviation personnel must have operational physiological and psychological fitness in order to perform their duties. This fitness may be affected by a variety of exogenous factors. These factors may be hardly perceptible and have a negligible effect in everyday life but may have a considerable impact on aircrew efficiency and safety. Several of these factors are described in this section. More detailed information may be found in Chapter 8, Coast Guard Aviation Medicine Manual, COMDTINST M6410.3 (series).

**C.5. Alcohol
Consumption**

Aviation personnel are restricted from aerial flight for 12 hours after last alcohol use and must have no residual effects. This includes the use of "low" and "no" alcohol beer. Residual effects include light-headedness, headache, fatigue, nausea, and lack of alertness.

C.6. Medication

Personnel engaged in flight operations shall not take any medication/supplement unless prescribed and/or approved by a flight surgeon.

Continued on next page

C.7. Flight Restrictions Following Blood and Bone Marrow Donations

The following restrictions on donating blood shall be observed because of the potential adverse effects of temporary blood deficiencies on aircrew performance in-flight:

- Aircrew personnel shall obtain permission from the Commanding Officer before donating blood.
- Aircrew personnel shall be grounded for a period of 3 days (72 hours) after a donation of 200 cc or more of blood.
- Aircrew personnel shall be grounded for a period of 7 days after donation of 500 cc or more of blood. (The standard unit of donated blood is less than 500 cc).
- Aircrew personnel shall not donate blood more than every 120 days.
- Aircrew personnel should not be permitted to engage in-flights above 35,000 feet, night flying, or other demanding flights for a period of one week after blood donation.

The following restrictions apply for aircrew personnel selected for and undergoing bone marrow donation:

- Aircrew personnel selected for and undergoing bone marrow donation are grounded for a minimum of 30 days

Return to full flight status after bone marrow donation must include examination and clearance by a flight surgeon

C.8. Hypobaric Exposure

The following restrictions to flight following low pressure chamber flights or accidental hypobaric exposure apply:

- Flight personnel shall not perform flight duties for 12 hours after exposure to low pressure chamber flight in excess of 30,000 feet. They may fly during the 12 hours as passengers in aircraft where cabin altitude does not exceed 10,000 feet.
- Individuals who have experienced a reaction to decompression (i.e., vasomotor collapse, unconsciousness, bends, etc.) shall be immediately referred to a flight surgeon.

C.9. Hyperbaric Exposure

Under normal circumstances, flight personnel shall not fly or participate in low-pressure chamber flights within 24 hours following Self-Contained Underwater Breathing Apparatus (SCUBA) diving, compressed air dives, or high-pressure chamber evolutions.

Where an urgent operational requirement dictates, flight personnel may fly within 12 hours of SCUBA diving, provided no symptoms of aeroembolism develop following surfacing and the subject is examined and cleared for flight duties by a flight surgeon.

Egress Breathing Device training does not limit personnel from flight or Low Pressure Chamber training. The duration and depth of training is not normally sufficient to produce symptoms of aeroembolism.

Section D. Flight Planning — Weather

D.1. General

D.1.a. Flight Clearance

Clearance for flights shall be based on the actual weather at the point of departure, the forecast weather en route, and the forecast at both the destination and alternate for the period beginning one hour before until one hour after the estimated time of arrival (ETA) at each point.

Existing weather may be used as a basis for clearance when no forecast weather is available and if the pilot's analysis of available data indicates satisfactory conditions for the planned flight.

D.1.b. IMC and IFR Flight Plans

An IFR flight plan shall be filed for all flights which may expect to encounter IMC in controlled airspace on any portion of the planned route.

D.1.c. Shipboard Operations

Weather criteria for conducting shipboard operations (including takeoff, landing, Vertical Replenishment (VERTREP), and Helicopter In-Flight Refueling (HIFR) are published in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

D.2. Departure Requirements

D.2.a. Standard Takeoff Minimums

Standard takeoff minimums apply in the absence of published nonstandard minimums for the departure airport. These minimums are:

- Meteorological visibility of one half statute mile for non-operational missions
 - Meteorological visibility of one quarter statute mile for operational missions
-

D.2.b. Nonstandard Takeoff Minimums

Published nonstandard takeoff minimums apply to all aircraft.

D.2.c. IFR Departures

For IFR departure criteria, see table 3-4.

Continued on next page

D.3. Destination Requirements

D.3.a. Destination Forecast Unavailable or Below Minimums

No clearance shall be authorized for destinations at which there is no Terminal Aerodrome Forecast available, or the forecast weather will be below compatible minimums (ceiling and visibility) upon arrival unless an alternate airport is available at which forecast weather conditions are equal to or better than the following:

For fixed wing aircraft:

- Ceiling is at least 2000 feet above the airport elevation
- Visibility is at least three statute miles

For rotary wing aircraft:

- Ceiling is at least 1000 feet above the airport elevation or at least 400 feet above the lowest compatible approach minimum, whichever is higher
- Visibility will be at least two statute miles

Continued on next page

Table 3–4

IFR Departure Criteria	
Departure Airport Weather	Procedure Required
Below takeoff minimums	Takeoff not authorized. ¹
Above takeoff minimums but below approach minimums (or no instrument approach available).	Takeoff authorized ^{2, 3, 4}
	Comply with published IFR departure procedures if specified. Otherwise, normal takeoff procedures ensure obstacle/terrain clearance. Select and indicate on the flight plan a departure alternate which meets the following criteria: ⁵
	Two-engine aircraft and multi-engine helicopters — not more than one hour from the departure airport at single engine cruising speed computed for no wind conditions.
	Four-engine aircraft — not more than two hours from the departure airport at three engine cruising speed computed for no wind conditions.
Above takeoff and approach minimums	Takeoff authorized. Comply with published IFR departure procedures if specified. Otherwise, normal takeoff procedures ensure obstacle/terrain clearance.
1 When the extreme urgency of the mission dictates, the Commanding Officer of the parent unit may authorize a takeoff below these minimums. When such urgent missions arise while an aircraft is on detached duty or at a remote location, the pilot in command, if he or she holds the Aircraft Commander (AC) designation, may also authorize a takeoff below these minimums. Consideration must be given to obstacle/terrain clearance, departure alternate, emergency landing capability, equipment limitations, and pilot ability.	
2 At airports not served by a published instrument approach, VMC must be maintained until reaching MEA/MOCA/MVA.	
3 The aircraft must be capable of maintaining MEA with one engine inoperative while en route to the departure alternate.	
4 IFR departures which require a departure alternate are not authorized for training flights or flights with a First Pilot (FP) in command.	
5 Departure alternates must meet the weather criteria specified in paragraph D.3.d. of this chapter.	

Continued on next page

D.3.b. Destination
Alternate Not Required

An alternate destination is required on all instrument flight plans except when the forecast weather at the first point of intended landing (for each point of intended landing on a stopover flight plan) meets the following conditions for the period one hour before to one hour after the ETA:

For fixed wing aircraft:

- Ceiling is at least 2000 feet above the airport elevation
- Visibility is at least three statute miles

For rotary wing aircraft:

- Ceiling is at least 1000 feet above the airport elevation or at least 400 feet above the lowest compatible approach minimum, whichever is higher
- Visibility at least two statute miles

D.3.c. Destination
Alternate Not Available

If the destination is an island or other remote location where an alternate is unavailable, the commanding officer of the unit to which the aircraft is attached will determine the amount of holding time that must be planned in lieu of an alternate; in no case shall this be less than one hour.

D.3.d. Alternate Airport
Minimums (Departure
and Arrival)

The weather at the departure alternate must be at or above the specified weather at departure time and forecast to remain so for one hour after ETA at the departure alternate. Weather at the arrival alternate must be forecast to be at or above the specified weather from one hour before to one hour after ETA at the arrival alternate. The following conditions apply:

For fixed wing aircraft:

- Ceiling at least 800 feet and visibility two statute miles for airports served by a compatible non-precision approach, and ceiling at least 600 feet and visibility two statute miles for airports served by a compatible precision approach; but weather at the alternate shall not be lower than the lowest compatible circling minimums as specified in current flight information publications.

For rotary wing aircraft:

- Ceiling at least 200 feet above the minimum for the approach to be flown, and visibility at least one statute mile but not less than the minimum visibility for the approach to be flown.

Continued on next page

D.3.e. Severe Weather
— Icing Conditions

D.3.e.(1) Fixed Wing
(F/W) Aircraft

F/W aircraft equipped with fully operable anti-icing/deicing equipment, may be flown through areas of known or forecast moderate icing.

Except where mission urgency dictates otherwise, flights shall be planned to avoid areas of known or forecast severe icing conditions.

D.3.e.(2) Rotary Wing
(R/W) Aircraft

H-60 aircraft with fully operable anti-icing and deicing equipment may be flown through known or forecast light icing, or moderate icing if mission urgency dictates. H-60 aircraft with fully operable anti-icing equipment, but inoperable deicing equipment, may be flown through known light icing if mission urgency requires.

D.3.f. Turbulence/Thunderstorms (Reported or Verified)

F/W flights shall avoid areas of severe turbulence and extreme turbulence. R/W flights shall avoid areas of moderate or greater intensity turbulence. All flights shall avoid thunderstorms.

This Page Intentionally Left Blank

Chapter 4

CONDUCT OF AIRCRAFT OPERATIONS

Introduction

This chapter provides guidance for operating Coast Guard aircraft. It is intended to supplement other applicable directives (such as Federal Aviation Regulations (FAR) part 91 and Flight Information Publications (FLIP)). Requests for deviation from the provisions of this chapter shall be forwarded to Commandant (CG-711) for approval.

In this chapter

This chapter is divided into nineteen sections:

- General
 - Ground Operations
 - Passengers
 - Flight Rules
 - Instrument Flight Requirements
 - Avoidance and Reporting of Actual and Near Midair Collision
 - In-Flight Emergencies
 - Flight Maneuvers
 - Flight Violations
 - Offshore Flight Operations
 - Night Vision Goggles (NVGs)
 - Transportation Flights
 - Maintenance Flights
 - Ferry Flights
 - Orientation Flights
 - Participation of Aircraft in Flight and Static Displays
 - Other Regulations and Considerations
 - Firearms
-

Section A. Conduct of Aircraft Operations

A.1. Control of Aircraft

A.1.a. Operating the Controls

The pilot in command (PIC) of an aircraft determines who shall operate the controls during all phases of flight. The PIC must use sound judgment in assigning pilots of limited experience to handle the primary flight controls when marginal flight conditions exist or when potentially hazardous operations are undertaken.

It is not intended that PICs should handle the primary flight controls in all but the most routine of flight situations. If this were so, prospective pilots in command would not have adequate opportunity to gain actual control experience while under supervision of more experienced pilots.

A.1.b. Changes in Physical Control

Changes in the physical control of aircraft shall be done in a positive manner. Normally, simple voice procedures shall be used.

The pilot exercising control is responsible until the relieving pilot verbally acknowledges acceptance of control. When verbal transfer is not possible for reasons such as high noise levels or an inoperative Intercommunications System (ICS), the following procedures shall be used:

- The pilot desiring to be relieved shall pat his or her head with one hand and then point to the other pilot.
 - The pilot taking control shall pat his or her head in acknowledgment and immediately and deliberately move both hands to the flight controls.
 - The pilot being relieved shall hold both hands overhead signifying that he or she has given up control.
-

A.2. Checklists

Checklists shall be used in all aircraft except those specifically exempted by Commandant (CG-711). The use of checklists is mandatory.

If a Commandant (CG-711) approved electronic checklist is used, there must be a paper copy within arms reach ready for immediate availability. In the absence of a Coast Guard promulgated checklist, the most recent checklist provided in the appropriate flight manual shall be used.

Local modifications to checklists, including partial completions without specific intent for flight operations, are not authorized without approval of Commandant (CG-711). "Rapid response" checklists must be published and approved for use at individual units by Commandant (CG-711).

A.3. Aircraft Manuals and Directives

All aircrew members shall be familiar with the publications that pertain to all aircraft for which they hold current designations. These publications include, but are not limited to, aircraft flight manuals, safety of flight supplements, and Commandant instructions. A current flight/performance manual and all pertinent checklists shall be carried on the aircraft and be available to the crew.

Continued on next page

A.4. Meteorological and Navigation Information

Commanding officers shall ensure that adequate meteorological and flight planning facilities are provided for the use of their assigned aircrews.

A.5. Minimum Equipment for Flight

It is desirable that all Coast Guard aircraft be fully equipped and have all components functioning properly on every mission. It is recognized that, for certain missions and under specific circumstances, safe operation is possible with less than all equipment operational. Commanding officers may publish minimum equipment lists for aircraft assigned to their units to serve as guidance for flight crews and to provide additional planning parameters for operational commanders.

The final responsibility regarding equipment required for a mission rests with the PIC. When the PIC considers an item essential for the accomplishment of the mission, he or she may designate the component or system as mission essential, and it will be repaired or replaced before departure. Acceptance of an aircraft by a PIC to operate on one mission or one mission segment without an item or system does not commit that PIC or another PIC to subsequent operations with the same item or system inoperative.

A.6. Unusual Performance of Aircraft

Commanding officers shall report to Commandant (CG-41), (CG-711), and (CG-1131) any abnormal, erratic, or unusual performance of assigned aircraft or their power plants. Recommendations for possible corrective action should accompany the report. In urgent cases, this report shall be made by message, action to Commandant (CG-41) and information to the appropriate District and Area Commander.

Material failures shall be reported in accordance with the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).

Section B. Ground Operations

B.1. Authorized Personnel

For starting of aircraft engines and engagement of rotors.

B.1.a. Aircraft Engines

An aircraft engine shall not be started unless a pilot, either designated in type or in training for designation in type, or a crew member certified in writing by the Commanding Officer as being qualified to perform engine starts, occupies a pilot's seat.

B.1.b. Helicopter Rotors

A qualified helicopter pilot shall occupy a pilot's seat whenever the rotor is engaged/turning.

B.1.c. Precaution

Before starting an engine or APU, the following precautions shall be observed:

- The aircraft parking brake shall be set (unless specified otherwise in aircraft flight manual).
 - A fire watch/observer shall be posted outside the aircraft to monitor each engine as it is started. If the aircraft is so equipped, the fire watch/observer shall have two-way ICS communications with the person starting the engine, unless impractical or unsafe.
 - The person starting the engine shall exchange signals with the fire watch/observer to ensure that the propeller/rotor and exhaust areas are clear.
 - A radio fire guard shall be established with the unit Operations Center or, when the Operations Center is not manned, with appropriate maintenance facilities to the greatest extent possible (e.g., maintenance control, aircraft shop).
 - If operating at a non-Coast Guard facility, a radio fire guard shall be established with a controlling entity of that airfield (e.g., FBO, Ground Control, Military Base OPS) that maintains the ability to notify crash rescue to the greatest extent practicable.
 - When the intent for flight exists, rotary wing aircraft during the course of a normal APU/engine start sequence and C-130 and C-144A aircraft operating off a power cart prior to engine start may be exempt from the radio fire guard requirement, as time between APU/engine start and takeoff is minimal.
 - The radio fire guard shall be secured at the completion of the ground APU/engine operations. The airborne call to the unit shall constitute the securing of the radio fire guard.
-

NOTE

If a fixed wing (F/W) aircraft departs the ramp before starting all engines, further engine starts may be accomplished without external fire watch/observers, if the starts are monitored from inside the aircraft.

Continued on next page

B.1.d. High Power Run-ups

Before conducting a high power run-up, the aircraft shall be positioned so that neither the propeller/rotor nor the exhaust blast will cause damage to other aircraft or equipment.

B.2. Taxiing Aircraft

Only pilots designated in type, or in training for designation in type, or crew members designated in writing by the Commanding Officer as being qualified to perform taxiing operations, shall taxi an F/W aircraft. Only pilots designated in type, or in training for designation in type, shall taxi a rotary wing (R/W) aircraft.

When an aircraft is being taxied within 25 feet of obstructions, a two person (minimum) taxi crew is required. One member will serve as taxi signalman/wing walker, the other as an additional wing walker. Aircraft shall not be taxied at anytime within 5 feet of obstructions.

Further guidance on aircraft taxiing and ground handling is provided in paragraph 2.E. and Enclosure (8) of the Aeronautical Engineering Maintenance Management Process Guide, CGTO PG-85-00-110. This process guide can be found on the ARSC web site.

B.3. Controlling Vehicles Near Aircraft

When operating vehicles near aircraft, adequate guide personnel shall be used to help vehicle operators maintain safe clearance. This requirement must be stressed at non-aviation units.

B.4. Hot Refueling

Hot refueling is the act of fueling an aircraft while one or more engines are operating. Gravity feed hot refueling is prohibited. Aircraft equipped with a single-point (pressure) refueling capability may be hot refueled with the PIC's approval.

NOTE

Repetitive hot refueling should be carefully considered. By lengthening the interval between through/postflight inspections, the risk of experiencing an undetected aircraft component problem increases.

For the H-65, this interval should not routinely exceed six hours.

B.5. Loading/Unloading of Cargo

It is the responsibility of the PIC to ensure that cargo is loaded and unloaded safely. Whenever the cargo may affect the weight and balance of the aircraft and whenever hazardous cargo is involved, loading and unloading operations shall be supervised by a qualified loadmaster, when available, and shall be conducted in accordance with Preparing Hazardous Material for Military Air Shipment, AFMAN 24-204. It should be noted that the supervisory role of the loadmaster in no way diminishes the overall responsibility of the PIC.

Normally, the aircraft's engines should not be running and propellers/rotors should not be turning while cargo loading/unloading operations are in progress. If required by operational exigency and deemed by the PIC to be safe under the existing conditions, cargo may be loaded/unloaded with engines running and/or propellers/rotors turning. Care shall be taken to ensure that an adequate safety zone is maintained around any turning

Continued on next page

propellers/rotors and exhaust blast areas during any “engines running” evolution.

Care shall also be taken to prevent any foreign object debris (FOD) from becoming dislodged and damaging the aircraft or cargo, or injuring personnel during the loading process.

B.6. Embarkation/Debarcation of Personnel

It is the responsibility of the PIC to ensure that all personnel enter and leave the aircraft safely. Normally, the aircraft’s engines should not be running and propellers/rotors should not be turning while personnel are entering or leaving the aircraft.

If required by operational exigency and deemed by the PIC to be safe under the existing conditions, personnel may enter or depart the aircraft with engines running and/or propellers/rotors turning. Care shall be taken to ensure an adequate safety zone is maintained around any turning propellers/rotors and exhaust blast areas during any “engines running” evolution.

Care shall also be taken to prevent any foreign object debris (FOD) from damaging the aircraft or cargo, or injuring personnel. In particular, personnel approaching or departing an aircraft while its engines are running shall not wear headgear other than approved safety helmets or wear or carry other items which may easily become separated from their persons by a gust of wind or propeller/rotor/exhaust blast.

B.7. Security of Aircraft

B.7.a. Aboard Military Units

Whenever it is reasonable and prudent, based on mission requirements, location of the operating area (OPAREA), etc., Coast Guard aircraft should be left on military installations between flights so that military security is provided for the aircraft.

B.7.b. Away from Military Units

When an aircraft must be left on a field, airport, beach, body of water, or other area where a military installation cannot provide for its security, the PIC shall take adequate measures to ensure the safety of the aircraft and its equipment.

All classified material shall be safeguarded in accordance with the Physical Security and Force Protection Program, COMDTINST M5530.1 (series) and local instructions.

All weapons shall be safeguarded IAW the Ordnance Manual, COMDTINST M8000.2 (series).

B.7.c. Aircraft Involved in a Mishap

When an aircraft is involved in a mishap, the PIC is responsible for the security of the aircraft until relieved by proper authority.

If the PIC is incapacitated, the senior crew member not incapacitated shall assume this responsibility.

Section C. Passengers

C.1. Passenger Briefing

The PIC shall ensure that all passengers embarked on Coast Guard aircraft receive an adequate briefing. This briefing shall cover at least the following:

- Use of personal flotation equipment (if flight will proceed over water)
- Applicable alerting signals in event of emergency
- Action required in case of ditching or crash landing
- Location and operation of emergency exits and other equipment
- Seat belt rules and signals
- Restrictions regarding electronic devices (IAW FAR 91.21), firearms, etc.
- Oxygen (location and operation)
- Smoking prohibition

C.2. VIP Passengers

Except in an emergency, Very Important Person (VIP) flights should not arrive before the latest ETA that has been forwarded to the destination. The latest ETA should be sent in ample time to permit notification of interested personnel.

C.3. Safety Restraint of Passengers

C.3.a. Passenger Restraint

Each passenger provided transportation on Coast Guard aircraft shall occupy a suitable seat and shall at least wear a properly fastened seat belt when the aircraft is in motion, unless otherwise authorized by the PIC.

C.3.b. Transporting Children Aboard Coast Guard Aircraft

All children above the age of two being transported aboard CG aircraft will occupy their own seat with separate seat belt for takeoffs, landings and ground taxi operations.

Children under the age of two may:

- Be held by an adult who is occupying an approved seat or berth, provided the child has not reached his or her second birthday and the child does not occupy or use any restraining device
- Occupy an approved child restraint system provided the child is accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight

Continued on next page.

Continued on next page

C.3.b.(1) Transporting Children Aboard Coast Guard Aircraft (continued)

The approved child restraint system must bear one or more labels as follows:

- Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear the label: "This child restraint system conforms to all applicable Federal motor vehicle safety standards."
- Seats manufactured to U.S. standards on or after February 26, 1985, must bear two labels:
"This child restraint system conforms to all applicable Federal motor vehicle safety standards"
"THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT"

C.3.b.(2) Unacceptable Seats

The following child/infant seats are not acceptable for use in aircraft:

- Vest and harness-type child restraints manufactured between 1 January 1981 and February 1985
- Unlabeled seats and seats manufactured before 1 January 1981

C.3.c. Pilot Responsibilities for Passenger Restraint

The PIC may not deviate from these rules to obtain additional or maximum seats. The PIC may authorize passengers on transport missions to unfasten their seat belts and move about in the aircraft during flight in smooth air. The PIC must be alert at all times to anticipate turbulent flight conditions while passengers have seat belts unfastened.

C.4. Uniform Requirements for Passengers

Passengers on Coast Guard aircraft are authorized to wear civilian clothing. Uniforms should be worn by Uniformed Services passengers when required by operational necessity or the DOD Foreign Clearance Guide. When civilian clothing is worn, it shall be in good taste, at the discretion of the Commanding Officer or the PIC. Coast Guard personnel must ensure that their dress and personal appearance are appropriate for the occasion and will not discredit the Coast Guard. Conservative styles and fashions are authorized. Tank tops or T-shirts worn as outer garments, shorts, sandals and revealing, soiled or torn clothing are examples of inappropriate civilian clothing.

C.5. Passenger Identification

Positive identification is required of all passengers.

C.6. Passenger Travel Orders and Authorizations

Official travelers will have in their possession a travel or transportation authorization published by an appropriate approving authority. Travelers other than DHS employees or members of the U.S. Uniformed Services are also required to possess documentation that their travel aboard Coast Guard aircraft has been approved in accordance with this manual.

C.7. Hoisting

Hoisting of helicopter passengers is described in paragraph H.12. of this chapter.

Section D. Flight Rules

D.1. Overview

Federal Aviation Regulations (FARs), International Civil Aviation Organization (ICAO) Conventions (except as provided in FLIP General Planning (GP)), International Regulations for Preventing Collisions at Sea, and the U.S. Air Force Foreign Clearance Guide are binding on Coast Guard personnel in the operation of all Coast Guard aircraft, including UAS and lighter than air vehicles. Exemptions exist for some military and SAR operations.

This is not blanket authority to avoid compliance with FAR part 91.119 (c). (See [Appendix E](#): FAA Exemption No. 5231B, exempting the Coast Guard from the provisions of FAR sections 91.117(b), 91.119(c), and 91.159(a)).

D.2. Fuel Reserve Requirements

Fuel reserve requirements are outlined in Chapter 3, paragraph B.4. Additional fuel reserve requirements in lieu of a destination alternate for remote locations are discussed in Chapter 3, paragraph D.3.c.

D.3. Air Defense Identification Zones (ADIZ)

All procedures for operating within or transiting ADIZs shall be obeyed.

D.4. Special Transponder Identification Friend or Foe (IFF) Modes and Codes

Coast Guard aircraft are authorized to squawk mode 3 code 1277 on search and rescue missions when operating under the following conditions:

- On Visual Flight Rules (VFR) flight plans or VFR segment of a composite Instrument Flight Rules (IFR)/VFR flight plan
- En route to, from, or within the designated search area

Special IFF codes for law enforcement and other missions are promulgated separately.

D.4.a. IFF Mode 4/5 Employment

IFF Mode 4 or 5 provisions are included in all CG aircraft to meet national defense and homeland security operations throughout global combat theaters and within CONUS during implementation of the Emergency Security Control of Air Traffic (ESCAT) plan as governed by 32CFR245.5. CG IFF Mode 4/5 operations shall be consistent with applicable DOD directives and regulations.

D.5. Position Reports

The Telecommunications Manual, COMDTINST M2000.3 (series), prescribes requirements for position reporting by Coast Guard aircraft.

Continued on next page

D.6. Operations Over the High Seas

All Coast Guard aircraft are to comply with the provisions of FLIP General Planning, Chapter 8. The following supplements section 8-8, "Operations Not Conducted Under ICAO Procedures," when operating within international airspace. Operations under "Due Regard" or the "Operational" prerogative of military aircraft shall be regarded as deviation from normally accepted operating procedures and practices. It should only be undertaken when mission requirements dictate and safety requirements can be met. When "Due Regard" operations are conducted, full responsibility for separation between Coast Guard aircraft and all other aircraft, both public and civil, falls on the Coast Guard. Airspace de-confliction is the responsibility of the operational and tactical commanders. These commanders must ensure procedures are in place to minimize the risk, including de-confliction procedures and a tactical communications plan. Commanders must be especially vigilant in identifying situations where more than one aircraft are directed to operate in the same area or to proceed to the same point.

Aircraft are normally operated with exterior lights energized. If mission requirements dictates, and the aircraft commander determines that safety requirements can be met, exterior lights may be secured when operating "Due Regard." The risks must be carefully weighed against the gains when invoking military necessity as a rationale for noncompliance with regulations. When lights out operations are desired, the operational commander shall specifically authorize it in the appropriate tasking order. Aircraft may be authorized, but not directed to operate with lights out. The aircraft commander is ultimately responsible for the safe conduct of his/her flight. The minimum requirements and procedures that must be fulfilled when operating military "Due Regard" in international airspace are outlined in paragraphs D.6.a. through D.6.e. of this chapter.

D.6.a. Aircraft Operating "Due Regard" in VMC

The guidance in paragraph D.5. of this chapter applies.

D.6.b. "Lights Out" Operations

Early planning is recommended so airspace can be de-conflicted and other agency aircraft can be advised. If not already coordinated, all Coast Guard aircraft shall advise their respective operational and tactical commander prior to conducting "lights out" operations. The time, altitude, duration, and location of operations should be provided. Throughout "lights out" operations, Coast Guard aircraft shall maintain radio communications with their operational or tactical commander.

D.6.c. Aircraft Operating Within RADAR Surveillance and Radio Communications of a Surface RADAR Facility

The surface facility must be certified to provide aircraft separation by the appropriate controlling agency.

D.6.d. Operations with Aircraft Equipped with RADAR Providing Separation

No Coast Guard aircraft are equipped with RADAR that is sufficient to provide separation between that aircraft, aircraft they may be controlling, and other aircraft. Other aircraft that are properly equipped and certified by the appropriate controlling agency can provide aircraft separation.

Continued on next page

D.6.e. IMC Operations

Aircraft operations in IMC in uncontrolled airspace shall be minimized. Aircraft commanders must exercise sound judgment before entering IMC in uncontrolled airspace keeping in mind the goal is to descend or ascend to acquire VMC. Exterior lights should be energized. They may be secured at the aircraft commander's discretion when meteorological conditions affect the ability of the crew to safely fly the aircraft. Minimum descent altitudes in IMC, if prescribed by the applicable aircraft flight manual, are mandatory. If mission requirements allow, aircraft commanders shall broadcast their intentions on applicable common or guard frequencies before initiating operations in IMC in uncontrolled airspace. Except when mission requirements dictate, prolonged IMC operations in uncontrolled airspace are not allowed.

Section E. Instrument Flight Requirements

E.1. Approved Publications

Flights under Instrument Flight Rules (IFR) in Coast Guard aircraft shall be conducted in accordance with the rules, regulations, or recommended procedures specified by the publications in the following rank ordered list. Where conflicting regulations or varying procedures exist, the higher ranking publication shall be followed:

- Coast Guard Directives
 - Federal Aviation Regulations (Parts 91 and 97) and FAA Manuals
 - Joint FAA/Military Documents
 - DOD Publications
 - All manuals presenting approved standard instrument approach procedures (such as those published by JEPPESEN and the U.S. Government)
-

E.2. Instrument Approaches

E.2.a. Approach and Landing Minimums

Instrument Approach Procedures (IAP) approved by either the FAA or DOD are authorized. An approach may be started and flown to minimums when the reported weather is below minimums; however, the pilot will not descend below the published minimum descent altitude/decision height (MDA/DH), or land, unless he or she can:

- Comply with FAR 91.175
- Proceed with a contact approach

For instrument approaches, the term "military aircraft" in FAR 91.175(c) does not exempt Coast Guard aircraft from adhering to the provisions of that paragraph.

E.2.b. Helicopter Circling Approach Minimums

Helicopters may circle to land at the straight-in MDA or DH as long as they can accomplish the maneuver within 500 feet of the runway center line and remain within the airport boundaries. Determination of departure or arrival requirements discussed in Chapter 3, section D, should not be predicated upon this capability.

E.2.c. Aircraft Approach Categories

Coast Guard aircraft are assigned to specific approach categories as prescribed in FAR part 97.3 (see also Aeronautical Information Manual (AIM) glossary). If it is necessary to maneuver at speeds in excess of the upper limit of a speed range for a category, the minimums for the next higher category should be used.

E.2.d. Shipboard Instrument Approach Procedures

Shipboard instrument approach procedures are published in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series) and NWP-3-04.1 (series).

Continued on next page

**E.3. Global
Positioning
System**

For IFR flight, aircraft navigation shall not be predicated solely upon the Global Positioning System (GPS) unless the aircraft GPS Navigation System is FAA/ICAO or DOD certified for IFR navigation and approaches. Non-certified GPS may be used as a means to confirm other navigation sources.

Aircraft shall operate all GPS systems including the GPS 3A receiver with KEYMAT loaded in the PPS or SAASM mode of operation in accordance with published flight manual procedures. Aircraft GPS loaded with P-codes will be maintained IAW Appendix L.

Section F. Avoidance and Reporting of Actual and Near Midair Collisions

F.1. Midair Collision Avoidance

F.1.a. Inoperative IFF Transponder or TCAS

Coast Guard aircraft should not commence a flight with an inoperative IFF transponder unless mission urgency dictates. TCAS is not mission essential equipment. Properly functioning TCAS must be used unless mission requirements require securing it.

F.1.b. Occupation of Pilot Seats

The PIC of a Coast Guard aircraft that requires two pilots will ensure that both pilot seats are always occupied. If either pilot must leave his or her seat, he or she will be relieved by another pilot or aircrew who will perform the lookout duties of the absent pilot. At least one seat will always be occupied by a pilot qualified in type. Further guidance concerning seat occupation during orientation flights can be found in paragraph N.4 of this chapter.

F.1.c. Simulated Instrument Flight

Simulated instrument flight in any Coast Guard aircraft is prohibited unless a safety pilot qualified in type is in the cockpit. ATC Mobile Instructor Pilots may fly simulated instrument approaches with a copilot under instruction acting as safety pilot. In addition, a lookout having direct communications with the safety pilot shall be so stationed that he or she can scan the sector normally observed by the pilot simulating instrument conditions.

F.1.d. Simulated Instrument Conditions

Any device (i.e., instrument hoods) used to simulate instrument conditions for a pilot shall meet the following criteria:

- It shall not obscure the safety pilot's vision.
 - It shall be capable of instant removal or positioning by the pilot using the device so that he or she has full, unobstructed vision.
 - The device shall not be attached to the aircraft.
-

F.2. Reporting Actual or Near Midair Collisions

A midair collision is an incident where two or more aircraft actually collide while in-flight. A near midair collision is an incident where a possibility of collision occurs as a result of proximity of less than 500 feet to another aircraft (excluding normal formation or air intercept flight), or a report is received from a pilot or a flight crew member stating that a collision hazard existed between two or more aircraft.

A serious near midair collision is an incident where a possibility of a collision occurs, and evasive action and/or bodily injury occurs as a result. Actual and near midair collisions shall be reported in accordance with Chapter 9, paragraph H.2.

Section G. In-Flight Emergencies

G.1. Overview

Whether or not a given situation constitutes an emergency is not always obvious. Weather, equipment malfunctions, etc., can cause a whole range of conditions from mere annoyances to bona fide emergencies. If, after considering the particular circumstances of the flight, the pilot feels a potentially dangerous or unsafe situation exists, an emergency should be declared.

G.2. Declaring an Emergency

To declare an emergency when operating with an IFR clearance, the pilot should contact the Air Traffic Center (ATC) on the currently assigned frequency.

If the flight is not communicating or receiving services, the pilot normally should call the air traffic facility or other agency in whose area of responsibility (AOR) the aircraft is operating.

If the station does not respond, the emergency message may be addressed to any station, tower, radio or radar. The international emergency frequency 121.5 MHz may be used as necessary.

G.3. Emergency Actions

In an emergency, pilots are allowed to deviate from any rule in FAR part 91, Subparts A and B, as well as any Coast Guard directive on flight operations, to the extent necessary to meet the emergency.

The PIC may be required to submit a written report of the circumstances surrounding the incident via the chain of command to Commandant (CG-711) and (CG-1131) and possibly to the chief of the ATC facility involved as well.

G.4. OPCON Notification

As soon as practicable following the declaration of an emergency, the PIC should notify, or request the agency with whom he or she is communicating to notify, the command exercising operational control (OPCON) over the aircraft for that mission. During this critical time, communications with the aircraft should be limited to providing whatever assistance or advice is requested by the PIC.

The responsibility for the safety of the aircraft and crew and the successful resolution of the emergency lies solely with the PIC.

Section H. Flight Maneuvers

H.1. Maximum Performance Maneuvers

The number of persons aboard a Coast Guard aircraft engaged in critical flight operations where actual maximum performance maneuvers are required for test and evaluation shall be limited to those required to properly operate the aircraft and accomplish the mission.

In the case of helicopter autorotation practice, participation by all Coast Guard flight crew members is permitted consistent with crew make-up for other operational training maneuvers.

H.2. Aerial Deliveries

Aerial deliveries shall be conducted in accordance with the procedures, limitations, and techniques developed by the respective aircraft standardization units and equipment limitations specified in the Aviation Life Support Manual, COMDTINST M13520.1 (series).

H.2.a. Normal Delivery

Aerial deliveries from F/W aircraft are restricted to the normal delivery listed in [Chapter 7](#) of this manual or the aircraft flight manual. Any item that will fit inside an A-13/20 can, AN/SSQ-57A sonar buoy container, an Air Drop System (ADS) can, or the dewatering pump container, and satisfies the weight requirements specified in the Aviation Life Support Systems Manual, COMDTINST M13520.1 (series) for a single parachute, may be dropped.

H.2.b. Special Mission Equipment

For those units so tasked by Commandant (CG-711), any special mission equipment certified in accordance with this paragraph may be dropped.

H.2.c. Other Items

Approval from Commandant (CG-711) must be obtained before airdrop of any item not provided for in this paragraph.

H.2.d. Hoist/Hover Deliveries

Hoist/hover deliveries by helicopters are not considered aerial deliveries for the purpose of this paragraph.

H.3. Parachute Jumps and Air Deployment of the Combat Rubber Raiding Craft (CRRC)

Commanding officers may authorize training or operational parachute jumps from Coast Guard C-130 aircraft by DOD contingents having parachute insertion as primary mission capability. Parachute jumps from USCG helicopters are prohibited. A qualified jumpmaster, current in accordance with parent service directives, shall supervise the jump evolution aboard each aircraft. Each individual jumper must likewise be currently qualified.

Commanding officers may authorize training or operational deployments of the CRRC from Coast Guard C-130 aircraft.

Review of the appropriate loading manuals by DOD personnel and a Coast Guard qualified Loadmaster/Dropmaster is required before flight to ensure the CRRC is rigged correctly. DOD personnel must be qualified in accordance with their own service directives to air deploy the CRRC from C-130 aircraft. One DOD team member must remain with the aircraft to provide assistance during Post Drop Checklist execution.

Continued on next page.

Continued on next page

H.3.a. Parachute Jumps and Air Deployment of the Combat Rubber Raiding Craft (CRRC) (continued)

Before flight, all participating Coast Guard aircrew and DOD personnel shall be briefed on standard terminology, crew duties and responsibilities, and emergency procedures. Before flight, a Coast Guard qualified dropmaster will be designated to supervise DOD personnel during the deployment.

H.4. Formations of Aircraft

H.4.a. Right-of-Way

When a single Coast Guard aircraft is converging with an aircraft formation at approximately the same altitude (except head-on, or nearly so), the formation flight has the right-of-way. In other cases, the formation shall be considered as a single aircraft and the right-of-way rules of FAR 91.113 apply.

H.4.b. Joining Formations

Unless specifically ordered to do so by competent authority, a single aircraft shall not join a formation in the air, and one formation shall not join another. The order for joining a formation in the air shall be given before takeoff of the aircraft concerned, or by radio, and the leader of the formation to be joined shall be informed of the order.

H.4.c. Joining Safely

When the pilot of a single aircraft or the leader of another formation is about to join a formation, the single aircraft shall approach the formation to be joined from a safe altitude and from the side. It shall not enter the formation until its presence has been acknowledged by the leader of the formation to be joined.

H.4.d. Formation Flights

Formation flights of dissimilar aircraft shall be thoroughly coordinated and briefed by all participating flight crews before conducting the flight. Particular attention shall be given to differences in wake turbulence, minimum and maximum airspeeds, maneuvering power requirements, clearing, and flight safety.

H.4.e. Formation Flight in Instrument Meteorological Conditions

Formation flight in Instrument Meteorological Conditions (IMC) is prohibited.

H.4.f. Night Formation Flights

Formation flights at night in VMC are authorized by units having a waiver from Commandant (CG-711) to conduct NVG night formation flights for TVI, AVI, or RWAI training and operations. These units may also conduct night formation flights operating under VMC in ICAO.

H.5. Flight in Vicinity of Civil Aircraft

Commercial carriers and other civil aircraft shall be avoided unless close approach is required by SAR, law enforcement operations, homeland security/defense operations, or conforms with air traffic control (ATC) or control tower clearances.

Continued on next page

H.6. Zooming of Vessels

No vessels shall be “zoomed” except in an emergency or during a SAR operation when the attention or assistance of the vessel is desired. Identification passes for law enforcement and SAR are authorized. The FAA has specifically authorized the Coast Guard to deviate from FAR 91.119(c) on law enforcement missions, specifically to operate no closer than 200 feet from a suspect vessel and no closer than 500 feet from other persons, vehicles, vessels or structures. The text of the FAA exemption is shown in [Appendix E](#). When radio communications cannot be established with the vessel, the aircraft first should establish identification, then indicate to the vessel the location of the distress, using the procedure described in FLIP or AIM. Other methods of getting the attention of a vessel, such as using the loud hailer or dropping message blocks, may be employed.

H.7. Aggressive Maneuvering

The aggressive use or maneuvering of a Coast Guard aircraft to stop a noncompliant vessel is prohibited. The Commandant has granted an exemption from this policy for assets trained and equipped for assignment to AUF duties. This policy is prescribed in the Maritime Law Enforcement Manual, COMDTINST M16247.1 (series). The Maritime Law Enforcement Manual (MLEM), COMDTINST M16247.1 (series) contains the policy on use of force for Coast Guard aircraft

H.8. Feathering Propellers/Securing Engines

Except in an emergency, or as part of a Commandant (CG-711) approved pilot training syllabus, or as provided in section L of this chapter, no propeller shall be feathered or engine shutdown in flight. If a propeller is feathered or engine is shutdown in flight for other than an emergency, it must be conducted IAW with the following criteria:

- Entire feathered propeller/secured engine evolution conducted at or above 6000 ft above ground level (AGL)
- Day, VMC only
- In the vicinity of a suitable airport with crash equipment immediately available

NOTE

These restrictions do not apply to C-130 aircraft if two or three engine operation is dictated by mission requirement.

H.9. Reduced Engine Operations

No C-130 missions shall be planned anticipating two or three engine operations. As a mission develops, if the PIC determines an urgent operational necessity (e.g., emergent SAR or LE, extending endurance to ensure on-scene relief), reduced engine operations are permitted. Budgetary considerations are not valid reasons for conducting reduced engine operations. Reduced engine operations in all other Coast Guard aircraft is an emergency situation and is not authorized for planning and/or operational missions.

Continued on next page

H.10. Helicopter External Load Transport

Helicopter external load operations (when using the helicopter cargo hook) shall be conducted in accordance with the procedures and limitations developed by the respective aircraft standardization unit.

The Multi-Service Helicopter External Air Transport Manual, COMDTINST M13482 (series) prescribes basic principles and procedures, as well as single and dual point rigging procedures.

Additional Vertical Replenishment (VERTREP) procedures are contained in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

In cases where the procedures published in particular manuals differ, the order of precedence shall be:

- Aircraft Flight Manual
- Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series)
- Multi-Service Helicopter External Air Transport Manual, COMDTINST M13482 (series)

Use of any external lift device not listed in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series) or the Multi-Service Helicopter External Air Transport Manual, COMDTINST M13482 (series) and not approved for use by Commandant (CG-711) and is not authorized. ■

H.11. Shipboard Helicopter Operations

These operations include helicopter landings and takeoffs aboard suitably equipped vessels, VERTREP, and Helicopter In-Flight Refueling (HIFR). When such operations involve military vessels, pilots shall comply with the requirements of the ship's parent service directives (i.e., Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series) for Coast Guard, NWP 3-04.1 (series) for U.S. Navy, and APP 2 (series) for NATO). Pilots shall comply with Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series) when such operations involve nonmilitary vessels.

H.12. Hoisting of Helicopter Passengers

Hoisting of helicopter passengers is authorized when personnel are transported to or from remote and isolated sites or vessels where a helicopter landing would be impractical. Such transfers should be accomplished only after existing conditions and circumstances surrounding the event have been considered. Hoist transfers shall not be made for convenience only. VIPs shall not be hoisted for administrative or logistical purposes.

Continued on next page

H.13. Hoisting of Divers

Deployments of tank equipped civilian or military rescue divers may be accomplished using the same procedures as used for harness deployments of Coast Guard Rescue Swimmers. The divers must be outfitted with Commandant (CG-711) approved hoist harnesses and must have completed a Commandant (CG-711) approved deployment familiarization syllabus. In the event a rescue diver is not equipped with the proper gear or has not completed the familiarization syllabus, the diver may only be deployed via the rescue basket, without the tanks. An additional basket hoist will be required for delivery of the dive tanks and other required gear. When available, a qualified Rescue Swimmer should be deployed before diver deployments to assist divers and survivors in the water. Free fall deployments of rescue divers, with or without tanks, are prohibited.

The use of rescue divers may be appropriate in SAR scenarios where the possibility exists that survivors are trapped in an overturned or submerged vessel or aircraft. Additionally, deployment of divers may be required while assisting local, state and federal agencies in the execution of their duties.

H.14. Vertical Insertion Operations

Vertical insertion operations are divided into three categories: BVI, AVI and TVI. VI capabilities are defined in the MLEM.

BVI and AVI operations are authorized for rotary wing units and boarding teams that have completed the appropriate Commandant (CG-711) approved qualification syllabus.

Approval authority for operational employment of BVI and AVI is the appropriate District Commander. Authority to conduct BVI may be delegated to the appropriate Air Station Commanding Officer and Sector Commander. Approval authority to conduct TVI rests with the appropriate Area Commander. This authority may be delegated to the appropriate District Commander.

Unit aviation personnel participating in TVI operations must receive initial training and qualification from ATC Mobile and successfully complete a Commandant (CG-711) approved syllabus. Additional requirements include an annual Aerial Gunner, Tactics and TVI unit standardization check from ATC Mobile. TVI training or operations are prohibited for any unit without prior permission from Commandant (CG-711).

For a thorough discussion of VI tactics and employment, aircrew shall reference the MLEM, the Vertical Insertion chapter of the Aviation Special Missions Tactics, Techniques and Procedures Manual, COMDTINST M16601.20 (series) and the appropriate sections of the aircraft's flight manual.

H.15. Vertical Delivery of Boarding Team Members

District Commanders, on a unit-by-unit basis, may authorize Vertical Delivery (VDEL) of USCG boarding team members to conduct vessel inspections and examinations. This authority may be delegated to the appropriate operational command level. Such members must first complete a Commandant (CG-711) approved qualification syllabus.

H.16. Rotary Wing Restrictions

Continued on next page

H.16.a. Rotor Blade Damage	<hr/> <p>If rotor blade damage in-flight is known or suspected, the helicopter shall be landed as prescribed in the applicable flight manual. Possible loss of the airframe after a safe landing is not sufficient cause to continue flight with rotor blade damage. For further flight information, see Chapter 2, paragraph F.3.</p>
H.16.b. Practice Autorotations	<hr/> <p>Practice autorotations must conform with the provisions of the applicable flight manuals and the following limitations:</p> <ul style="list-style-type: none"> • Practice autorotations shall be conducted only under daylight VMC • Practice autorotations shall be terminated with a power recovery at a minimum altitude of 10 feet • Practice autorotations shall be terminated at 1000 feet with a no-flare recovery, if crash equipment is not immediately available
H.16.c. Single-Engine Maneuvers	<hr/> <p>Except for Ariel 2C2 engined H-65s, practice single-engine maneuvers to a landing shall be conducted only at facilities that have crash equipment readily available.</p>
H.16.d. Water Operating Cover Requirement (Training Operations)	<hr/> <p>A cover boat or a SAR-capable helicopter with effective two-way communications shall be underway/airborne in the immediate area for all rotary wing water training flights that include the following maneuvers:</p> <ul style="list-style-type: none"> • Prolonged over water hovering/hoists by helicopters without single-engine continued flight capability. • Rescue swimmer operations. Visual contact with the operation shall have been established by the cover boat or other helicopter prior to deploying the swimmer to the water. The SAR-capable helicopter providing cover shall have a rescue swimmer as part of the aircrew. • Night approaches to the water, including PATCH, MATCH, or CATCH. <p>Before starting any such operation, the type of training, position, and the number of persons aboard each helicopter will be passed to and acknowledged by the unit providing cover.</p>
H.16.e. Hoisting of Canine Detection Teams	<hr/> <p>Hoisting of canine detection teams is authorized. Canine handlers must have completed the Commandant (CG-711) approved Boarding Team qualification syllabus. To deploy using the canine hoisting harness, the handler and canine must have completed the Commandant (CG-711) approved Canine Handler qualification syllabus.</p> <p>Approval authority for hoisting of Canine Detection Teams is the appropriate District Commander.</p> <hr/>

Section I. Flight Violations

I.1. Initial Action

When a report of an alleged violation is received, a commanding officer shall take the following steps.

- Determine the name and command of each pilot involved.
 - Within 24 hours, notify the command to which the pilot is attached that a violation has been alleged. Details concerning the alleged violation and a statement as to whether the pilot has been informed shall be included in this notification.
 - When the aircraft involved in the alleged violation cannot be positively identified, commanding officers of other units or agencies that may assist in identification shall be contacted. If identification still cannot be made, and if a Coast Guard aircraft is involved, details of the alleged violation will be forwarded to Commandant (CG-711).
-

I.2. Investigation and Formal Report

I.2.a. Convening Investigation

A commanding officer of an air unit who receives a report of alleged violation of flying regulations, allegedly committed by a person attached to the command, shall convene an investigation to determine the facts.

I.2.b. Conducting Investigation

If confirmed information indicates a major violation, such as careless or reckless operation of an aircraft, willful unauthorized flying through special use airspace, ADIZ, or foreign airspace, or failure to obtain or comply with pertinent ATC instructions, an investigation shall be made in accordance with the Military Justice Manual, COMDTINST M5810.10 (series).

I.2.c. Letter Report to Commandant

If a preliminary investigation indicates that the matter is not serious enough to warrant action prescribed in paragraph I.2.b., the Commanding Officer shall make a letter report to Commandant (CG-711), through the chain of command.

I.2.d. Record Use

Refer to [Chapter 9](#) of this manual for the use of the pilot's Accident and Flight Rule Violation Record.

Section J. Offshore Flight Operations

J.1. Overview

The commanding officer of a unit to which an R/W or F/W aircraft is assigned must carefully weigh the urgency of each offshore mission. Mission planning for offshore flight operations shall include an assessment of aircrew survivability and the risk management policy stated in Chapter 1, paragraph D.2. This analysis shall be based on the possibility that the aircrew might be forced into a survival situation during any phase of the mission.

J.2. Aircrew Survivability Factors

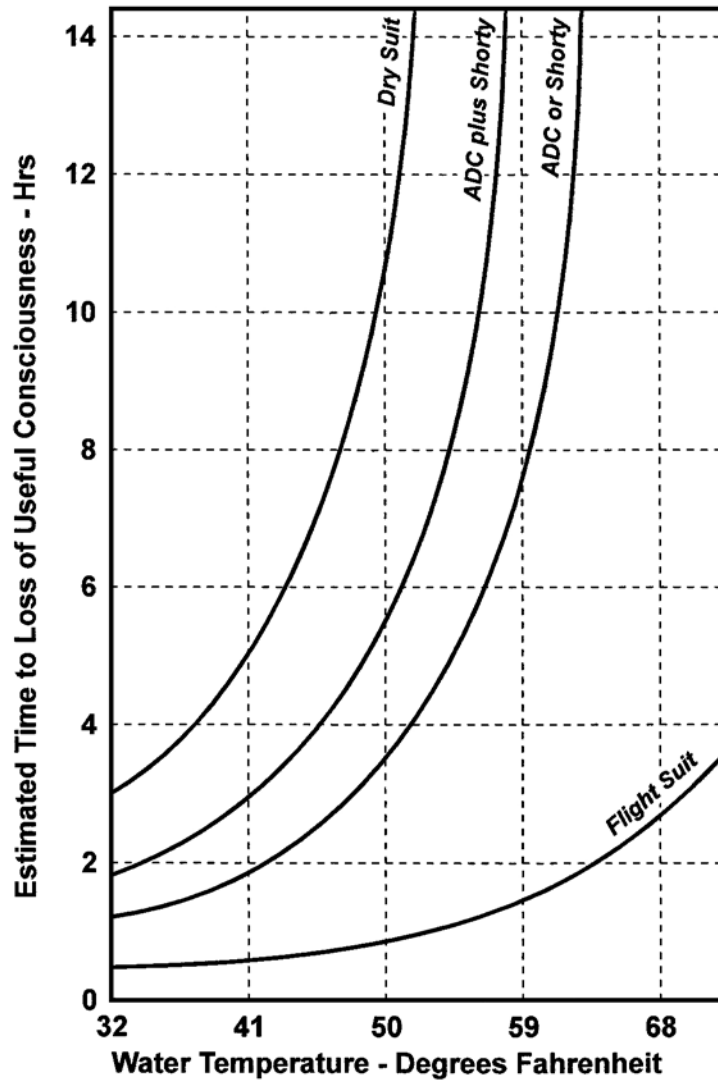
There are three factors that should be evaluated for each mission over water:

- Estimated time to loss of useful consciousness
 - Probable survival time
 - Estimated recovery time
-

J.2.a. Loss of Useful Consciousness

Loss of useful consciousness adversely affects the probable survival time since the crew member loses the physical ability to control the survival situation due to the debilitating effects of hypothermia, the abnormal lowering of internal body temperature. Even in situations where fatality from hypothermia is highly improbable, cold water greatly facilitates unconsciousness and/or death from drowning, often in the first 10 to 15 minutes, particularly for those not wearing flotation devices.

Continued on next page



Relationship among temperature, immersed clothing insulation, and estimated time to loss of useful consciousness for lean persons wearing Type I PFDs in calm water.

(Based on experimental data on males with 10% body fat.)

Figure 4-1.

Continued on next page

J.2.b. Probable Survival Time

Exposure to the chilling effects of cold air, wind, or water can result in fatal hypothermia. The rate of body heat loss increases as air and water temperatures decrease. Fatal results from hypothermia occur over four times more often in water than on land.

The curves in figure 4-1 were developed using known data points for specific sets of known conditions. In the general case, and even when conditions are close to those used to generate the curves, figure 4-1 should be used as a guideline, not as a precise indicator.

A large amount of individual variability can be associated with different body sizes, builds, level of body fat, physical fitness, and state of health. Specialized insulated protective clothing (e.g., survival suits, wet suits) are capable of increasing survival time from 2 to 10 times (or more) the basic duration shown in figure 4-1.

Table 4-1

HYPOTHERMIA FACTORS	
Slower Cooler	Faster Cooler
• High body weight	• Low body weight
• Heavy clothing	• Light clothing
• Use of survival clothing	• Rough sea
• Use of a huddling or other protective behavior	• Exercising, such as persons having to swim
• Partially climbing out of the water	

Table 4-2

SURVIVAL FACTORS	
Enhanced Survival Time	Diminished Survival Time
• Heavy clothing and/or protective behavior (e.g., huddling with other survivors or adopting a fetal position in the water)	• Physical activity (e.g., swimming)
• Climbing partially out of the water	• Rough seas
	• Lack of a PFD

J.2.c. Recovery Time

Recovery time is the total elapsed time from the occurrence of a mishap until the aircrew is rescued. Recovery time includes the time required for recovery resources to become aware of the mishap, ascertain the position of the downed aircrew, proceed to scene, conduct a search, effect rescue, and begin appropriate medical treatment.

Continued on next page

J.3. Unescorted Operations

The maximum recovery time should not exceed the estimated time to loss of useful consciousness.

J.4. Escorts

An escort should be provided anytime the commanding officer or PIC deems it necessary. An escort is recommended anytime the estimated recovery time exceeds the estimated time to loss of useful consciousness.

Section K. Night Vision Goggles (NVGs)

K.1. Definitions

The Night Vision Qualification involves the use of helmet or headgear mounted ANVIS type NVGs by pilots at flight control positions on training and operational missions.

K.2. General

Pilots will be either NVG qualified or NVG unqualified.

For rotary wing operations, NVG qualified pilots are able to conduct operations under NVGs. These operations include:

- Ground operations (ground, hover and air taxi)
- Visual and Instrument approaches to a hover over land or for non-ship-board takeoffs and landings
- Visual and instrument approaches to the water
- Hoists and R/S deployment and recovery sequences. This does not apply to copilots until successful completion of the night right seat syllabus

Shipboard landings and other advanced tactical missions (AUF, RWAI, etc.) will be individual qualifications. NVG training will be an inherent part of these qualifications but do not require additional NVG designations. NVG Shipboard qualification will be administered in accordance with the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

For fixed wing operations, NVG qualified is defined as a pilot being able to utilize NVGs for searches and drop sequences. NVGs shall not be used for ground operations, takeoffs, approaches or landings. If one or both pilots are not trained and current, then both pilots are considered unqualified for mission purposes.

K.2.a. Qualification Requirements

Completion of a Commandant (CG-711) approved ground training, including ATC Mobile NVG interactive courseware and flight training program appropriate for each aircraft type is required before qualification. The qualification shall be recorded in accordance with [Chapter 8](#). Pilots must have at least four hours of USCG NVG flight time in category with a minimum of one hour in type prior to designation. Aviation Special Mission qualified pilots may have additional NVG flight hour and proficiency minimums as outlined in table 8-2.

Formation flights at night in VMC are authorized by units who have a Commandant (CG-711) waiver to conduct NVG formation flights, for TVI, AVI, or RWAI training and operations. The Coast Guard has an FAA waiver to conduct these missions without position lights per [Appendix E](#).

K.2.b. Approved Simulator

Up to one half (1/2) of the minimum recurrent training requirements may be conducted in an NVG compatible flight simulator.

K.2.c. Special Attention

NVG operations over land require special attention due to the terrestrial hazards of moonlight shadowing, the inability to detect wires, etc.

Continued on next page

K.2.d. Lighting

NVG compatible lighting is required to conduct all NVG operations. Aircraft cockpit/compartment lighting may be turned off or dimmed if doing so does not interfere with the safe operation of the aircraft.

Normally, aircraft position lights shall not be turned off for NVG operations during training and operations. For Aviation Special Missions (AUF, VI, RWAI), the PIC may secure the position lights due to operational necessity. The Coast Guard has an FAA waiver to conduct these missions without position lights per [Appendix E](#). Because of operating conditions, the anti-collision lights may be secured when the PIC concludes it would be in the best interest of safety.

K.2.e. Filters and Vision Restriction Devices

Daylight NVG training filters or vision restriction devices are not authorized for NVG training.

K.2.f. Ease of Removal

NVGs shall be handheld or worn in such a manner that they may be immediately removed from the operator's field of view.

K.2.g. "In Use" Definition

For the purpose of this section, helmet or headgear mounted NVGs are defined as "in-use" whenever the NVGs are flipped down or within the operator's field of view.

K.2.h. Shipboard Operations Use

NVG Shipboard Landing will be a separate qualification. Aircrew must be "NVG Qualified" prior to attaining NVG Shipboard qualification. Shipboard unaided qualification and currency does not constitute NVG-aided qualification and currency. The approved NVG Ship-Helo procedures can be found in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

K.2.i. Mixed Use in the Cockpit

Use of different types/models of Commandant (CG-711) approved Coast Guard issued NVGs, by pilots in the same cockpit, is authorized. In addition, the use of NVGs by only one of the pilots is authorized.

K.2.j. Minimums

Chapter 8, table 8-2 of this manual describes the recurrent training minimums associated with retaining the NVG qualification. Any lapse in NVG minimums shall be handled in accordance with Chapter 8, section L (Lapse and Re-designation) of this manual.

K.2.k. Fixed Wing NVG Operating Mins

-
- Essential flight deck lighting must be NVG compatible
 - NVG operations are limited to 300' above water level (AWL) or 500' AGL and 30° angle of bank
 - After stabilized flight at 300' AWL is attained, a descent no lower than 200' AWL is authorized with no more than 15° angle of bank during drop pattern final or to investigate contacts
 - Pilot NVGs must be mounted to standard helmet or headgear
 - At least one Radar Altimeter (RADALT) must be operative
-

Section L. Maintenance Flights

L.1. Overview

Maintenance flights are by their very nature one of the most potentially hazardous flight regimes encountered on a day-to-day basis. In order to minimize the risks involved in this essential phase of aircraft maintenance, commanding officers shall ensure that all maintenance flights are conducted in compliance with the guidance provided herein, and with the proven practices specified in the Aeronautical Engineering Maintenance Manual, COMDTINST M13020.1 (series). Particular attention should be paid to crew experience, environmental factors, and preflight preparation, including detailed briefings on all aspects of the flight.

L.2. Flight Verification Check

L.2.a. Restrictions

There are no special restrictions on pilot/crew assignment for flight verification checks.

L.2.b. Completion

Flight verification checks of any component(s) or system(s) shall be completed before continuing a sortie as an operational or training mission.

L.2.c. C-130 Maintenance Flights

For maintenance flights in C-130 aircraft that have been downgraded by the commanding officer to flight verification checks as provided for in the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series), the following additional restrictions apply:

- Passengers shall not be carried
- Feathering of propellers shall be accomplished at or above 1000 feet AGL and in VMC

A C-130 annual Functional Check Flight (FCF) shall have the minimum pilot manning of an Aircraft Commander and First Pilot.

L.2.d. Weather

Flight verification checks should be conducted in VMC, if the item to be checked is required for flight in IMC.

Continued on next page

L.3. Maintenance Test Flights

L.3.a. Pilot and Crew Assignment

The minimum number of crew members shall be assigned to a maintenance test flight consistent with safe conduct of the flight and accomplishment of the required check(s).

Passengers shall not be carried.

The PIC shall occupy a pilot seat throughout the flight and shall operate the primary flight controls during takeoffs and landings.

Technical Observers may be included as part of the minimum number of crew members if their presence is required to accomplish the objectives of the test flight.

A C-130 annual functional check flight (FCF) is considered a test flight.

Minimum pilot requirements for test flights are:

- All except SRR Helicopters— an AC and FP. A commanding officer may authorize a copilot in lieu of the first pilot for deployed aircraft.
- SRR Helicopters— an AC.
- When practicable, an aeronautical engineering officer should be assigned to test flights of unit aircraft. It is not necessary for the aeronautical engineering officer to be the PIC.
- Minimum requirements for ground turns in the H-60 are an AC and qualified aircrew. The aircrew must occupy the CP seat.

L.3.b. Precautionary Information

L.3.b.(1) Maintenance Briefing

Prior to a test flight, the PIC shall be briefed by maintenance personnel as to the exact nature of the maintenance performed and the procedures to be used to accomplish the functional check(s). The PIC will signify receipt of a QA Briefing and the intention to conduct the required functional checks by signing and dating the Quality Assurance Briefing blocks on the EAL Maintenance Record Review screen or when applicable the Flight Safety Maintenance Document.

Additional administrative procedures to ensure fulfillment of this requirement are prescribed in the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series).

L.3.b.(2) Feathering

Feathering of propellers or engine shutdowns shall be accomplished at or above 6000 feet AGL and in VMC.

Continued on next page

L.3.c. Clearance Criteria

L.3.c.(1) Weather

Test flights should be conducted during daylight hours in VMC. If necessary to accomplish assigned operational missions, the Commanding Officer may waive this requirement if the flight can be conducted safely under the existing conditions. This authority may not be delegated.

L.3.c.(2) Hover Checks

Hover checks for helicopters may be accomplished at any time at the discretion of the Commanding Officer.

Section M. Ferry Flights

M.1. Transfer

Authority

Commandant (CG-711) will direct the transfer of all aircraft.

M.2. Inventory and Custody

When an aircraft is transferred between reporting custodians, the procedures contained in the Aircraft Transfer Process Guide (CGTO PG-85-00-160) shall be used.

Section N. Orientation Flights

N.1. Orientation Flight Program

Participation in orientation flights is intended to afford first hand opportunities to observe the missions of Coast Guard aviation. Orientation flights shall be secondary to an assigned primary mission of the flight. Participation in a flight for orientation purposes is not considered "transportation," although participants shall be manifested as passengers. Since it is possible for flights that are assigned a bona fide primary mission to be used also for secondary purposes, transportation and/or orientation flight opportunities may be scheduled on the same flight, both in a secondary purpose of flight capacity.

Regardless, the person(s) receiving the orientation flight opportunity shall not use the same flight for point-to-point transportation purposes. For example, a local area orientation flight for an official may be scheduled as a secondary purpose of a flight that is primarily scheduled for LE or MEP. The flight may not stop at a location other than the point of origin to deplane the official for follow-on purposes; to do so, the official must be in a transportation status, not an orientation status.

An area, district, sector or group commander's over flight reconnaissance of their area of operation for familiarization is neither transportation nor orientation, but rather a mission requirement for the effective conduct of command and control responsibilities (landing at a location other than the original point of departure is not authorized under this section).

The orientation flight program includes two categories of flight opportunities: operational orientation and restricted orientation flights. These categories are described in paragraphs N.4. and N.5.

N.2. General Restrictions

Flights that include orientation shall normally depart and return to the same location. Reasonable stopovers are permitted as long as participants remain, for all practical purposes, with the aircrew and conduct no other business. Orientation flights shall only be conducted in multi-engine aircraft. Participants shall be properly identified and sponsored, and where applicable, the appropriate organizational uniform shall be worn.

Sponsoring organizations that require parental consent for their own members to participate in special activities shall be responsible for satisfying their own such needs; the Government has no such requirement. Only minor additional expenditure of operating funds is authorized for these flights.

Access to sensors and sensor capabilities by orientation flight participants shall be carefully monitored to avoid security compromises. Access shall be granted only to individuals with previously verified clearance appropriate to the classification of the sensor or its capabilities.

N.3. Approval Authority

The minimum level of approval authority for orientation flight opportunities is no lower than the commanding officer of aviation units with aircraft assigned and of vessels with aircraft embarked or deployed.

Continued on next page

N.4. Operational Orientation Flights

Operational orientation flight opportunities are intended to afford full operational familiarization with the missions of Coast Guard aviation. Due to the inherent increased level of risk associated with operational missions, such flights are limited to those personnel whose professional interaction with the Coast Guard will be clearly enhanced.

Exposure of participants to unusual or hazardous conditions should be kept to a minimum. Authorized participants include the following:

N.4.a. Participants
Authorized to Occupy a Pilot Seat and Operate the Flight Controls of a Coast Guard Aircraft.

Participants allowed to occupy a pilot seat and actuate the flight controls include the following classes of individuals: Coast Guard Officer Candidates selected for flight school, pre-transitioned (unqualified in type) Direct Commission Aviator, Coast Guard Aviators (unqualified in type), Academy Cadet Aviation Training Program (CATP) personnel, and Flight Surgeons.

Active participation in Coast Guard Aviation missions greatly enhances experiences and knowledge of the overall Coast Guard mission. In this program, specific personnel are allowed to occupy a pilot seat and operate the flight controls. Flight surgeons get an initial exposure to flying aircraft as an important part of their training. Remaining familiar with the physiological aspects and dynamic nature of flight through orientation flights provides valuable experiences and assist flight surgeons in making informed medical decisions involving pilots and aircrew. Coast Guard Officer Candidates selected for flight school, pre-transitioned (unqualified in type) Direct Commission Aviator, Coast Guard Aviators (unqualified in type), Academy Cadet Aviation Training Program (CATP) personnel, and Flight Surgeons may not occupy a primary flight control position while using NVG's. Flight conditions shall be VFR, along with the following restrictions.

N.4.a.(1) Seat Occupation

An aircraft commander shall occupy the pilot's seat (left seat for F/W, right seat for R/W).

- For HU-25 and HC-144 aircraft, the second pilot should occupy the jump seat as a safety observer.
 - For HC-130 aircraft, the second pilot should remain on the flight deck.
-

N.4.a.(2) HU-25 and HC-130 Aircraft

- For HU-25 and HC-130 aircraft, participants shall not occupy a pilot's seat below, 1,000 feet AGL/AWL.
 - Participants may operate the controls above 1,000 feet AGL/AWL.
-

N.4.a.(3) H-60 Aircraft

For H-60 aircraft, participants may not occupy either pilot seat during flight.

N.4.a.(4) H-65 Aircraft

For H-65 aircraft, participants may occupy the left seat pilot position during takeoff and landing. Participants may operate the controls above 500 feet Above Ground Level (AGL)/Above Water Level (AWL).

Continued on next page

N.4.b. Prospective Cadets/Selectees

This category includes prospective U.S. Coast Guard Academy Cadets, Officer Candidate School (OCS) selectees, and Direct Commission Program selectees. Persons in this category must show written proof that they have:

- Been tendered an appointment
 - Been selected
 - Been designated a finalist
 - Been assigned a sponsor under the Academy Sponsor Program (prospective U.S. Coast Guard Academy Cadets)
-

N.4.c. Coast Guard Auxiliary

Coast Guard Auxiliary members on competent orders.

N.4.d. Civil Air Patrol

Senior and cadet members of the Civil Air Patrol. Such personnel are authorized to:

- Take part, without restriction, in joint Coast Guard-Civil Air Patrol SAR or SAREX missions

Take part in non-SAR operational or logistic flights in multi-engine aircraft when performing official CAP duties and traveling under appropriate Transportation Authorization (TA) issued by proper Authority.

N.4.e. U.S. Uniformed Services Members

U.S. Uniformed Services members on active duty.

N.4.f. FAA Employees

FAA employees may also participate for:

- Flight-checking local Coast Guard air traffic control procedures and facilities, navigational aids, communications, and approach and departure procedures.
 - Examining rated aircrew personnel of the Coast Guard for civil pilot, navigator, or engineer certificates or ratings, provided a seating position permits direct monitoring of aircrew duties. Flights during which these examinations take place are not limited to the local flying area.
 - Familiarization with Coast Guard missions, flight profiles, and other interface with Air Traffic Control procedures and facilities.
-

N.4.g. Foreign Nationals

Foreign nationals, as representatives of their government, when participating in a joint mission involving the Coast Guard, or other official activity that provides an operational advantage to all parties. These flights must have the concurrence of Assistant Commandant for Operations, International Affairs.

N.4.h. Representatives of the Media

Representatives of the media when such participation will provide improved media coverage and will serve the interest of the Coast Guard and the public. Commandant (CG-0922) shall be notified through district (dpa) at the earliest opportunity to gain awareness of the event. Commandant (CG-0922) approval is not required. For local media flights, units shall notify district (dpa) at the earliest opportunity.

Continued on next page

N.4.i. Science
Community Members

Science support personnel working under the National Science Foundation (NSF) or other government agency direction, when such participation enhances his or her understanding of the science performed in the AOR.

N.4.j. Rescue Swimmer
Survivors

Active duty military personnel and Coast Guard Rescue Swimmer trained members of the Department of Homeland Security are authorized to act as survivors on RS training flights. Prior to flight the candidate must have completed the Rescue Swimmer Training Survivor syllabus with a qualified RS and receive a thorough passenger brief in helicopter type. Members of the media that meet the criteria of paragraph N.4.h. may be approved on a case by case basis to serve as RS survivors during daylight hours with Commandant (CG-711) approval.

N.4.k. Congressional
Members and their Staff

Congressional members or their staff sent to observe Coast Guard operations. Providing these members and/or their staff the opportunity to observe operations from the air will give them a better understanding of Coast Guard missions.

Requests shall be submitted to Commandant (CG-0921) via the most expeditious means. Commandant (CG-0921) will review requests and forward recommendations through Commandant (CG-711) for review to the Vice Commandant (CG-09) for endorsement.

In those instances where Congressional personnel contact an Air Station directly to request a flight, Commandant (CG-0921) will require the following information to process the request: date request received, originator of the request, date/location of flight, type of aircraft to be used, name and titles of personnel participating, purpose of the flight, flight plan, principal USCG units/personnel involved, USCG personnel escorting delegation, benefit to the USCG and Federal government, impact of denial, POC for Air Station and Congressional Staff. Once endorsed, requests will be sent for approval to the DHS Assistant Secretary for Legislative Affairs.

N.4.l. Coast Guard
Civilian Employees

Coast Guard civilian employees that will benefit from the exposure to Coast Guard missions provided by an orientation flight.

N.4.m. Department
of Homeland Security
Employees

Government employees that work for the Department of Homeland Security (DHS) or an agency within DHS that will benefit from the exposure to Coast Guard provided by an orientation flight.

Continued on next page

N.5. Restricted Orientation Flights

Restricted aircraft orientation flight opportunities are intended to afford a limited, brief familiarization with the missions of Coast Guard aviation, without exposure to the level of risk associated with operational missions. Such flights are restricted to the local flying area and the amount of time necessary for the orientation.

Participation in helicopter flights must be during daylight VFR flight conditions. Participants shall not be subjected to unusual or hazardous conditions. The following are authorized participants:

- Senior and Junior ROTC Cadets, designated applicants and key civilian officials of the sponsoring school directly involved in administering the ROTC program
- Naval Sea Cadets, and accompanying adult leaders
- State/US Maritime Academies (Kings Point, Maritime Academy, etc.)

N.6. Special Circumstances

Restricted orientation flights of nominal duration for special circumstances not already listed here may be requested. Special requests shall normally be limited to humanitarian requests, VIPs, etc., when in the best interest of the Federal Government, unusual public relations benefit, or humanitarian goodwill will be enhanced.

Requests for special orientation flights should be forwarded via the chain of command and all pertinent details shall be provided with the request sufficiently in advance to enable a timely review and decision. Amplifying information should include:

- Personnel involved
- Aircraft type
- A description of the purpose of flight
- The benefit to the interest of the Federal Government
- An assessment of impact of denial

All such requests shall be considered on a case by case basis. Such special requests, if deemed desirable, shall be sent via the chain of command to Commandant (CG-711) for review and forwarding to the Vice Commandant for approval.

Section O. Participation of Aircraft in Flight and Static Displays

O.1. Overview

Various organizations request the participation of Coast Guard aircraft in local demonstrations and celebrations. Several provisions of the Coast Guard Public Affairs Manual, COMDTINST M5728.2 (series), are applicable as modified herein. Contact the District Ethics Office for current procedures for accepting gifts of travel expenses for Coast Guard personnel participating in air shows and static displays.

O.2. Approval Authority

The area or district commander (of the area or district to which the aircraft is assigned) has the authority to approve the participation of Coast Guard aircraft in all flight and static displays. The Commanding Officers of ATC and ARSC have approval authority for participation of their aircraft in flight and static displays. Commandant (CG-711) shall be notified of such participation.

O.2.a. DOD Eligible Events for Military Aircraft

With appropriate area/district commander approval, Coast Guard aviation units may provide aircraft to participate in DOD approved eligible events for military aviation. Separate requests for Coast Guard participation from the sponsors of these DOD approved events are not required. Coast Guard crews participating in these events shall cooperate with appropriate DOD and sponsor requirements.

O.2.b. Foreign Events

O.2.b.(1) Standard Procedure

In addition to the previously noted procedures, requests for flight and static displays in other countries shall be forwarded to Assistant Commandant for Operations, International Affairs for participation clearance.

O.2.b.(2) Short Notice Procedure for Coast Guard Vessels in Foreign Waters

Vessels with helicopters embarked or deployed while visiting foreign ports or transiting foreign territories may be asked to provide helicopter flight or static demonstrations on short notice. Commanding officers of such vessels may authorize demonstrations provided the following conditions are met:

- Diplomatic clearance for flight within the host country airspace must have been previously obtained in accordance with Foreign Port Calls, COMDTINST 3128.1 (series)
- Transportation of foreign nationals is not involved
- Instructions contained in the USAF Foreign Clearance Guide have been followed

O.2.c. Exceptions to Public Affairs Manual Requirements

If any of the stipulations in the Public Affairs Manual cannot be met, but the district/area commander considers the request reasonable, the request should be forwarded to Commandant (CG-711) for approval. Such requests must include a listing of the reasons for the exceptions and the area or district commander's recommendation.

O.3. Policy

Organization sponsors requesting the participation of Coast Guard aircraft and participating Coast Guard aircrews are governed by the following policy.

Continued on next page

O.3.a. Mission Impact and Cost	Sponsors must understand that in all cases, Coast Guard participation must not interfere with Coast Guard operations and training programs, and must be at no additional cost to the U.S. Government.
O.3.b. Space for Recruiting	Sponsors should consult with local Coast Guard recruiters and provide, at no charge, prime space at the event site for recruiting activities.
O.3.c. Profit	Sponsors must understand that the Coast Guard is unable to support events for which sponsorship is intended to make a business profit. Admission or other charges do not necessarily preclude Coast Guard participation. The Coast Guard cannot participate in events that charge admission unless its participation is incidental to the event, and not the primary attraction.
O.3.d. Considerations for Participation	Participation of Coast Guard aviation assets shall be committed only after consideration of safety, availability of assets, public demand, unit missions, event focus and appropriateness of participation, and equitable treatment of all eligible requests.
O.3.e. Fly-overs/Flight Demonstrations	<p>Requests for aircraft fly-overs or flight demonstrations will be considered for aviation oriented events (i.e., air shows, airport anniversaries, or dedication events), patriotic observances (one day only) held in conjunction with Armed Forces Day, Memorial Day, Independence Day, POW/MIA Recognition Day, or Veterans Day (event must be within seven days of the actual holiday date to be considered), or public affairs activities in support of local community relations programs of the Coast Guard.</p> <p>Other events may be considered on a case-by-case basis, and must have clear benefit to the U.S. Government. All requests for fly-overs or flight demonstrations, whether for the observances listed here or any others, shall be forwarded for approval by the area or district commander.</p>
O.3.e.(1) Holiday Fly-overs	Fly-overs for the five patriotic holidays are limited to one to four aircraft of the same type making a single pass.
O.3.e.(2) Funeral Fly-overs	Missing man formations are not authorized for community relations' events, but reserved for individual funeral or memorial services for designated active duty rated personnel or dignitaries of the U. S. Armed Forces and Federal Government.
O.3.e.(3) Joint Fly-overs	Joint fly-overs involving Coast Guard and DOD aircraft shall be governed by DOD policy.
O.3.f. Static Displays	Requests for aircraft static displays will be considered only for air shows, airport events, expositions and fairs, and public events that contribute to the public knowledge of Coast Guard equipment capabilities and missions. Events include recruiting and Coast Guard Day celebrations. All requests for static displays shall be forwarded to the area or district commander for approval.

Continued on next page

O.4. Responsibilities

Except for DOD approved eligible events for military aircraft, sponsors are required to submit a written request for participation of Coast Guard aircraft in-flight and static displays for approval through the local Coast Guard installation before the event.

If a fly-over or flight demonstration is planned, the sponsor is responsible for coordinating airspace use with, and complying with any restrictions imposed by the Federal Aviation Administration (FAA), or the appropriate foreign government agency, before submitting the request to the Coast Guard. The sponsor is responsible for all necessary security and safety precautions. In the request, the sponsor shall provide:

- The name, address, phone number of the organization, and a point of contact
- The event title, a description of the theme or objective, details of the location (i.e., airport, lake, park, city/state, elevation, runway length and width), and estimated attendance

O.5. Records

The PIC will include comments in the Remarks/Mission Narrative section of the ALMIS Flight Record to indicate that a copy of the approved request for flight or static display is attached to a paper copy of the flight record. The flight record will then be filed and maintained at the unit for one year.

Section P. Other Regulations and Considerations

P.1. Customs and Immigration

Commanding officers shall ensure that all aircrews comply with applicable customs, immigration, public health, and agriculture regulations.

P.2. Pets

Normally, pets are not authorized on government aircraft, except in very unusual circumstances, and at no cost to the Government. Bona fide working animals (i.e., guide, rescue, or police dogs) are not "pets" and are authorized transportation when accompanied by a handler.

Discretionary approval of pet transportation lies with the Commanding Officer, unless otherwise stated in this manual. Pets are specifically not authorized in conjunction with Environmental and Morale Leave (EML) travel aboard Coast Guard aircraft.

P.3. Annoyance to Persons and Endangering Property

Flights of Coast Guard aircraft shall cause a minimum of annoyance to persons and activities on the ground. It is not sufficient that the pilot is satisfied that no person is actually endangered. The pilot must exercise enough caution to be assured that no person on the ground could reasonably believe that they or their property is endangered. Except for operational missions requiring otherwise, the following specific restrictions apply.

P.3.a. Fur and Poultry Farms

Fur and poultry farms shall be avoided. Valuable broods and litters may be lost due to panic caused by aircraft.

P.3.b. Resorts

Resorts, including beaches, shall be avoided by F/W aircraft by at least one mile when at an absolute altitude of less than 2000 feet and by R/W aircraft by at least 1/4 mile when at an absolute altitude of less than 500 feet. This limitation is waived when these areas are overflowed in normal en route flights on airways, other point-to-point flights, or in compliance with an approved traffic or approach pattern.

P.4. Disturbance of Wildlife

Commanding officers shall implement standard operating procedures to prevent unnecessary over-flight of sensitive environmental habitat areas, to include, but not be limited to, critical habitat designated under the endangered species act, migratory bird sanctuaries, marine mammal haul-outs and rookeries, and sea turtle nesting beaches. Environmentally sensitive areas will be properly annotated on pilot's charts as required. When it is necessary to fly over such areas, an altitude of 2000 feet AGL shall be maintained except during emergency operations (e.g., emergency SAR, law enforcement, spill response, or during those portions of non-emergency missions requiring surveillance and identification (reconnaissance) of vessels). The amount of time spent at low altitudes should be limited to what is necessary to accomplish the particular emergency or reconnaissance operation. Routine training in and transits through critical habitat and high use areas shall not be conducted below an altitude of 2000 feet.

Hunting from any aircraft is prohibited.

Continued on next page

P.5. Smoking in Aircraft

Smoking in Coast Guard aircraft is prohibited.

P.6. Volcanic Ash Precautions

Avoid aircraft operations in the general area of volcanic activity unless specifically directed by higher authority. Since volcanic dust may extend for several hundred miles, flights should be planned well clear of the area and, if possible, the flight path should be above or on the upwind side of the volcanic dust. If volcanic dust is encountered, serious damage to aircraft surfaces, engines, windshields, and pitot static systems may occur. Aircraft, which have encountered volcanic dust, will not be cleared to fly until suitable maintenance inspections have been accomplished.

P.7. Cockpit Strategic Napping

The Flight Planning Crew Utilization guidance of [Chapter 3](#) is intended to assure a crew that is sufficiently rested to meet mission requirements. The long-range nature of C-130, C-37A, and C-143A missions can present unique challenges to crew alertness, despite meeting crew rest requirements. Such missions may involve protracted transit or loitering periods during which deliberate crew napping may improve alertness during more critical portions of the flight. When necessary, cockpit strategic napping is permitted subject to the following:

- Due to the increased staffing and mission requirements, cockpit strategic napping will only be employed in the C-130 community and at Air Station Washington in the C-37A and C-143A.
- Anticipated cockpit strategic napping will not be relied upon in evaluating crew fatigue during pre-mission planning.
- Cockpit strategic napping will be used only during a low workload portion of the flight (i.e. during transit or loitering at altitude with minimal conflicting traffic threat).
- To avoid post-awakening drowsiness from sleep inertia of deeper sleep, naps will be limited to 40 minutes maximum.
- Crew members employing strategic napping should be awakened one hour before an anticipated high workload event to ensure full alertness.
- Of the two pilots and flight engineer, only one may nap at a time. The remaining two crew members must remain in their crew positions.
- Hard deck altitudes and minimum airspeeds will be pre-briefed.
- The autopilot, Ground Proximity Warning System and Traffic Alert and Collision Avoidance System will be employed.
- If fatigue will unacceptably degrade safety, the mission will be discontinued and a replacement crew assigned.

Continued on next page

**P.8. Forcible
Evacuation of
Vessels**

In accordance with U.S. Coast Guard Addendum to the United States National Search and Rescue Supplement (NSS) to the International Aeronautical and Maritime Search And Rescue Manual (IAMSAR), COMDTINST M16130.2 (series), the Coast Guard is authorized to force or compel mariners to abandon their vessels for the purpose of saving their life. Although the Coast Guard does have the authority to compel a mariner to abandon their vessel in a life threatening situation, it is always preferable that a mariner would voluntarily evacuate when necessary. Coast Guard aircrews should endeavor to use all means, including powers of persuasion, to encourage a mariner to evacuate, when appropriate. Forcible evacuations should only be attempted when it is necessary to save lives. Aircraft shall not normally use force to compel evacuation since rescue swimmers are not normally qualified boarding team members.

The decision to order a compelled or forcible evacuation for the purpose of saving lives will be based on the myriad of factors that combine to make each SAR mission unique. These factors include the on scene environmental conditions, the presence of a hazardous bar, shoals or other hazardous obstruction, the condition of the mariner's vessel, available Coast Guard resources, the fitness and experience of the Coast Guard personnel on scene and the expertise of the authority ordering the evacuation.

The decision to force or compel mariners to abandon their vessels should normally be made by the cognizant District Commander, however, if exigent circumstances warrant immediate action, the On-Scene Commander may authorize this action. In this case, the SMC and District Commander shall be notified immediately. In all cases, the order of a compelled evacuation and the circumstances leading to such and order shall be logged by the air station involved on the situation report.

Section Q. Weapons

Q.1. Overview

There is an operational requirement for weapons, including firearms and oleoresin capsicum (OC) pepper spray, to be carried on board Coast Guard aircraft by members of various law enforcement agencies and Coast Guard non-aircrew members, and in some cases by Coast Guard aircrew members.

Policy regarding firearms and OC pepper spray on board Coast Guard aircraft is contained in the Maritime Law Enforcement Manual, COMDTINST M16247.1 (series). The intent of this policy is to provide maximum personnel readiness while minimizing the potential for an accidental discharge. The condition of firearms is mission and scenario dependent (i.e., loaded/unloaded, round chambered/clear). Missions are discriminated by whether the aircraft is used for transport only, or situations where the aircraft/crew are part of a special operation requiring personnel to be armed.

For general shipment of firearms/ammunition as cargo, the guidance provided in AFMAN 24-204, Preparing Hazardous Materials for Military Air Shipments, [Chapter 3](#), shall be used. In cases where the aircraft/crew is part of the specific operation with the armed contingent, firearms may be carried on Coast Guard aircraft subject to the following restrictions.

Q.2. Firearms Carried by Coast Guard Flight Crews

Q.2.a. Handguns

Handguns may be carried by Coast Guard flight crew members on board aircraft if required due to the operational environment (OPBAT, HITRON, AUF etc.), training for missions requiring the carrying of weapons, or when providing security for an automatic weapon as required in the Ordnance Manual, COMDTINST M8000.2 (series). All flight crew members carrying handguns shall be qualified and current in accordance with Ordnance Manual, COMDTINST M8000.2 (series).

Only Coast Guard issued weapons shall be used. Handguns carried by aircrews shall be carried in approved holsters. The use of personal firearms or holsters is prohibited. Commandant (CG-711) shall develop and maintain a list of approved holsters.

Handguns equipped with an external safety and decocking lever shall be carried with a magazine inserted, round chambered, decocked, safety lever in the safe position and weapon holstered. Handguns with no external safety or decocking lever shall be carried with a magazine inserted and round chambered IAW Ordnance Manual, COMDTINST M8000.2 (series).

Continued on next page

Q.2.b. Long Rifles/Shotguns/Semiautomatic Weapons

These weapons may be carried by Coast Guard flight crew members on board aircraft if required due to the operational environment, (e.g., OPBAT, HITRON, Polar Operations, AUF), training for missions requiring the carrying of weapons, or when providing security for an automatic weapon as required in the Ordnance Manual, COMDTINST M8000.2 (series). If these types of weapons are carried, adequate mounting brackets or storage shall be provided so that the flight crew member is not required to hold the weapon when not in use. The use of "tactical slings" or other similar means of carrying the weapon are authorized for use by properly trained personnel (i.e., Aviation Gunners or personnel in the Aviation Gunner syllabus). Equipment used in this manner shall be approved (by manufacturer and model) by Commandant (CG-711) and Office of Specialized Capabilities (CG-721). The weapon shall be removed from the bracket only when directed by the PIC.

These weapons shall not be loaded, nor shall a round be chambered until directed by the PIC. These weapons shall be Coast Guard issued and used only by flight crew members who are qualified and current in accordance with the Ordnance Manual, COMDTINST M8000.2 (series). The use of personal firearms is prohibited.

Q.2.c. Authorization to Carry Firearms

If the commanding officer of an aviation unit determines that there is a requirement for aircrews to carry firearms aboard unit aircraft, he or she shall submit a written request, through the chain of command, to Assistant Commandant for Operations (ACO).

Q.3. Firearms Carried by Military Troops and LE Officers on Board CG Aircraft

Subject to the commanding officer's approval, military troops and law enforcement officials, operating in an official capacity, will normally be allowed to carry their weapons while being transported on Coast Guard aircraft. Those officials shall adhere to the policy within this section.

Q.3.a. Missions Requiring Transportation for Logistics

Weapons may be carried on missions requiring transportation for logistics. The weapons can be loaded but will not have a round in the chamber. Personnel shall clear their weapons, in a safe area away from the aircraft and from public areas, before boarding the aircraft.

Q.3.b. Other Missions

The policy in paragraph Q.1. of this chapter shall apply on missions where:

- Transportation of personnel where the aircraft is part of the support (e.g., dignitary protection)
- Operations where Coast Guard personnel as well as other agency personnel are armed as part of a mission

The weapons that other agencies carry may differ from Coast Guard weapons. It is prudent for the PIC to ascertain what type of weapon each armed official carries and provide him or her a brief of the Coast Guard firearm policy before the flight. The following guidance shall apply.

Continued on next page

Q.3.b.(1) Handguns

Single action handguns (the hammer must be manually cocked other than by pulling the trigger) shall NOT have a round chambered (under the firing pin). Handguns designed with an internal or operator activated device that “physically” locks the firing pin in the retracted position unless the trigger is pulled, and double action handguns (the hammer/weapon is cocked and released by pulling the trigger) shall be allowed to have a round in the chamber with the handgun safely decocked and holstered. All handguns with mechanical safety devices shall have those safeties engaged.

All handguns shall remain holstered at all times unless conditions specified in paragraph H.7. of this chapter develop. Under no circumstances are the military troops or law enforcement officials authorized to discharge their weapons from the aircraft without the approval of the PIC.

Q.3.b.(2) Long Guns

Long guns (rifles, submachine-guns, shotguns), regardless of agency policy, shall be transported unloaded, i.e., no ammunition inserted into the weapon, unless specifically authorized by the PIC.

If adequate brackets are available, long guns shall be carried in the same status or condition per paragraph Q.1.b. of this chapter. If brackets are not available, the long guns shall be secured in a manner acceptable to the PIC.

Under no circumstances are the military troops or law enforcement officials authorized to load and/or discharge their weapons from the aircraft without the approval of the PIC.

Q.4. Authority and Responsibility of the PIC

The PIC shall ensure that the policy provided in this section is enforced. In cases not specifically covered, he or she shall be the final authority as to the condition of firearms to be carried on Coast Guard aircraft.

Q.5. Firearms Transported as Checked Baggage or Cargo

Firearms transported as checked baggage or cargo on board Coast Guard aircraft will be unloaded and surrendered to a flight crew member for stowage in accordance with AFMAN 24-204. In cases where a survivor or object of a search is recovered and found to have a firearm in his or her possession, the firearm shall be unloaded and surrendered to a flight crew member for stowage.

At no time are firearms, which are transported as cargo, to be hand carried by the custodian while in-flight. Firearms transported as checked baggage shall be adequately secured to be inaccessible to passengers while they are aboard the aircraft.

Continued on next page

Q.6. Airborne Use of Force

The following process shall be used for employment of airborne use of force at Coast Guard aviation units:

- Commandant (CG-711) shall task ATC Mobile via memorandum to provide AUF training to specific aviation units.
- When AUF training is complete, ATC Mobile shall notify Commandant (CG-711) via memo, recommending the unit to be authorized for AUF operations.
- Assistant Commandant for Operations (ACO) will authorize aviation units for AUF operations via memorandum. The appropriate District will promulgate amplifying guidance for employment of AUF in the Area of Operations.

Aviation units that are authorized for AUF operations may conduct AUF in accordance with the Maritime Law Enforcement Manual, COMDTINST M16247.1 (series).

Q.7. Deadly Force

The use of deadly force from an aircraft is authorized as prescribed in the Maritime Law Enforcement Manual, COMDTINST M16247.1 (series).

If deadly force or suppression shots are fired from Coast Guard aircraft, contact Coast Guard Command Center at Headquarters (1-800-DAD-SAFE or 202-372-2100) by the most expedient means possible. Follow the use of force reporting requirements in the Coast Guard Maritime Law Enforcement Manual, COMDTINST M16247.1 (series) and the Critical Incident Stress Management (CISM) Instruction, COMDTINST 1754.3.

A message report, providing the details of the incident, shall be sent to Assistant Commandant for Operations (ACO), through the chain of command, within four hours of notification of the incident or end of the flight, whichever occurs first.

Section R. Electronic Equipment

R.1. Overview

Portable Electronic Devices (PEDs) produce electromagnetic energy, which can interfere with an aircraft's avionics equipment. Conversely, electromagnetic energy produced by the aircraft may hamper the operation of some PEDs.

For the purposes of this instruction, "portable" electronic devices are transportable carry-on devices or stand-alone devices not certified as part of the standard aircraft configuration.

PEDs are classified as either Intentional or Nonintentional transmitters.

- Intentional transmitting devices are designed to radiate signals outside the device to accomplish their functions. These devices, such as hand held radios, cellular phones, and wireless laptops can produce high levels of electromagnetic energy and potentially interfere with flight critical avionics systems.
- Nonintentionally transmitting devices do not need to transmit signals outside the device to accomplish their functions. But like any electrical or electronic device, they will emit some level of radiation. Depending on the characteristics of this radiation, interference with aircraft systems can occur. Examples of nonintentional transmitters are DVD players, nonwireless laptops, personal digital assistants (PDAs), and digital cameras.

R.1.a. Aircraft Commander Responsibilities

The Aircraft Commander shall prohibit the use of any device suspected of creating interference with any system on the aircraft.

R.2. Approval for Use

R.2.a. Intentional Transmitters

Intentional transmitting devices (hand-held radios, satellite phones, cell phones, and laptop computers with wireless capability) shall not be used on Coast Guard aircraft unless specifically approved by Commandant via the ACCB process after an Electromagnetic Compatibility (EMC) Safety of Flight Test (SOFT) has been completed. Due to the hazards associated with a portable device that can generate electromagnetic energy fields in excess of the susceptibility levels of the aircraft electronics, approval will normally be contingent upon connecting the approved device to an integrated aircraft plug-in port for transmission via an externally mounted aircraft antenna that is bonded to the skin of the aircraft.

ACCB and EMC SOFT approved intentional transmitting devices are approved for use in flight at the discretion of the Aircraft Commander.

R.2.a.(1) Wireless Devices

Only aircraft with an FAA approved wireless Local Area Network (LAN) installation are permitted to utilize wireless devices (e.g., laptops, Personal Digital Assistants (PDA)) in flight. Wireless device use shall comply with FAA, Radio Technical Commission for Aeronautics (RTCA), and USCG guidelines.

Continued on next page.

Continued on next page

R.2.a.(2) Wireless
Devices (continued)

The Aircraft Commander shall ensure all wireless devices which are not EMC SOFT approved are wireless disabled prior to aircraft engine start and shall ensure that these devices remain wireless disabled until after engine shutdown.

R.2.b. Nonintentional
Transmitters

R.2.b.(1) Electrically
Interfaced

Nonintentional transmitting devices that are electrically interfaced with the aircraft shall require both Electromagnetic Compatibility (EMC) Safety of Flight Test (SOFT) and ACCB approval.

R.2.b.(2) Nonintentional
Transmitting Devices
Authorized Anytime

Small nontransmitting, noninterfaced devices, such as personal medical devices (e.g., hearing aids, pacemakers), audio and video recorders and playback devices (e.g., MP3 players), hand-held calculators, electronic watches, small digital cameras, etc., are authorized for use at the discretion of the Aircraft Commander and do not require EMC SOFT or ACCB approval.

USCG Aircraft Repair and Supply Center (ARSC), Engineering Services Division (ESD) can provide further information and guidance for devices not listed.

R.2.b.(3) Computers,
Peripherals, and
Electronic Entertainment
Devices

EMC SOFT approved laptop computers, peripherals, and electronic entertainment devices (e.g., DVD players) are authorized for use at the discretion of the Aircraft Commander and do not require ACCB approval.

USCG Aircraft Repair and Supply Center (ARSC), Engineering Services Division (ESD) can provide further information and guidance for devices not listed.

**R.3. Medical
Equipment**

The use of manual pacer-defibrillators by qualified providers, as defined by Commandant, Operational & Clinical Medicine Division (CG-1121), is approved for use aboard all Coast Guard aircraft.

The use of only Commandant (CG-1121) approved Automatic External Defibrillators (AED) by qualified providers, as defined by Commandant (CG-1121), is authorized for use aboard all Coast Guard aircraft.

Defibrillators are required to use internal batteries as the sole power supply. No connection to aircraft power is allowed.

Commandant (CG-1121) shall provide further information and guidance concerning specific Medical Portable Electronic Devices (MPEDs) authorized to be used in flight. USCG ARSC Engineering Services Division (ESD) shall provide technical and data evaluation.

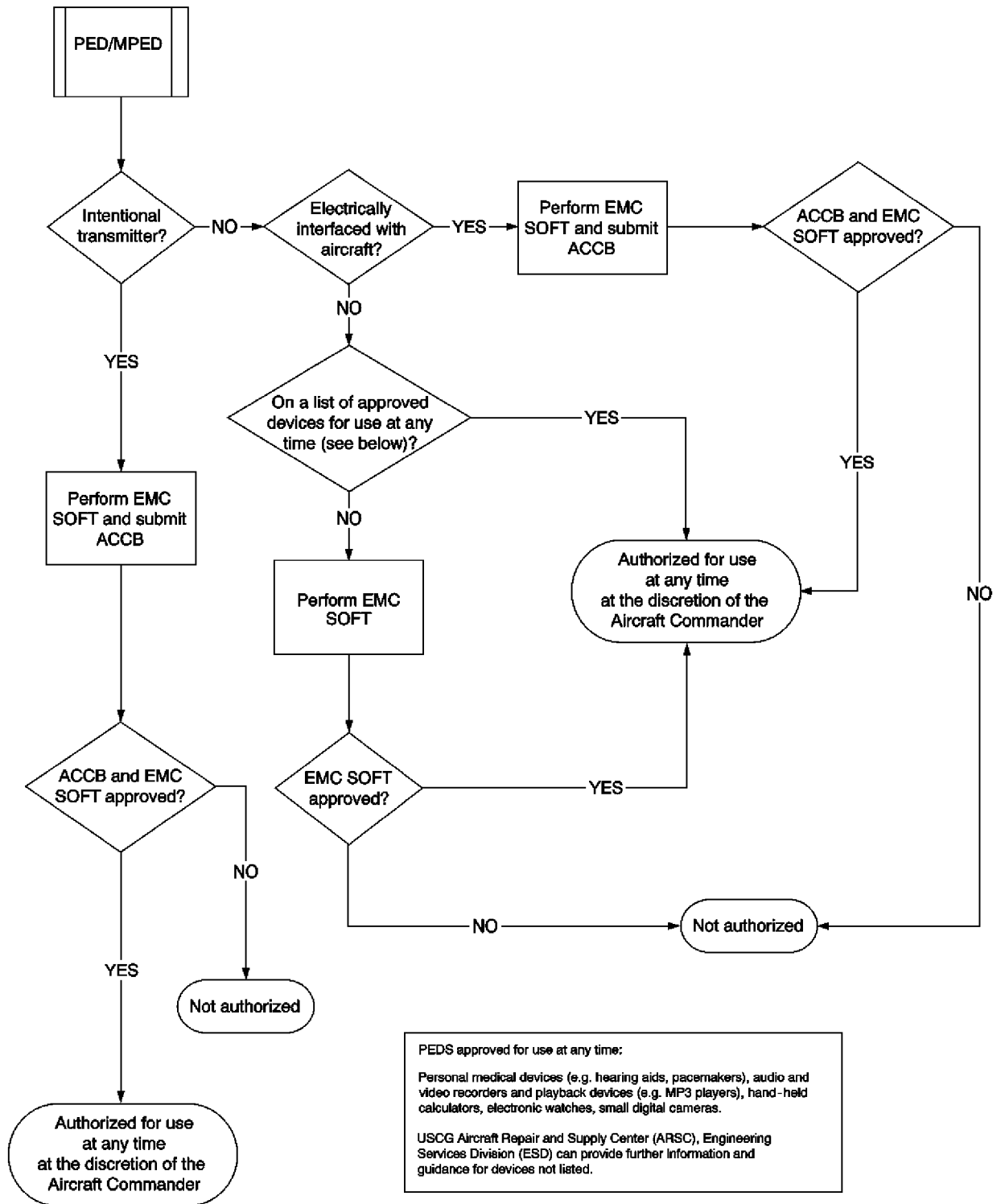
R.3.a. SAR or
MEDEVAC

During SAR or MEDEVAC situations, the use of Emergency Medical Services (EMS) provided nonintentional transmitting medical monitoring equipment is authorized for use at the discretion of the Aircraft Commander.

Continued on next page

**R.4. Safety
of Flight
Testing (SOFT)
Requirements**

PEDs and MPEDs requiring EMC SOFT shall comply with guidance set forth in the USCG Electromagnetic Compatibility Process Guide, CGTO PG-85-00-220. USCG ARSC Engineering Services Division (ESD) shall provide technical guidance and data evaluation.



cg9100138a

Figure 4-2.

Section S. Aircraft C4ISR Systems

S.1. Overview

Airborne Command, Control, Communications, Computing, Intelligence, Surveillance and Reconnaissance (C4ISR) systems shall be employed for maritime broad area and confined area operations to enhance Maritime Domain Awareness (MDA) and information exchange with the USCG Common Operational Picture (COP). Commandant (CG-711) shall direct and manage the development, installation and employment of CG aircraft based C4ISR systems. Aircraft C4ISR system manning, operator training and recurrent training shall be administered by Commandant (CG-711). C4ISR system maintenance and sustainment shall be directed by Commandant (CG-41). Commandant (CG-1131) shall work with (CG-711) to ensure human machine interface and human factors attributed to the design and operation of the systems are addressed. All CG aircraft shall have available and employ C4ISR systems to enhance the Surveillance, Detection, Classification, Identification and Prosecution (SDCIP) process in the conduct of all CG missions and roles.

S.2. C4ISR Security

C4ISR systems shall comply with Operational Security (OPSEC), Information Security (INFOSEC) and Communications Security (COMSEC) considerations to prevent compromise and release of classified information or system capability. Operational Commanders are responsible to develop guidance and administer C4ISR Security programs and operations. Operational Commanders and Commanding Officers shall adhere to Commandant policy to provide:

- Cryptographic Security
- Physical Security
- Transmission Security
- Emissions Security
- Technical Surveillance Countermeasures

S.3. C4ISR Recordings and Electronic Memory Devices

All system components, their operational capability, any recorded media or electronic devices connected to C4ISR systems shall retain the classification of the system, information on the system or circuit, and/or the classification of the operation. All operators shall have a security clearance equal to or greater than the classification of the system to which they are operating or accessing. Below is a list of system components or attached systems with a digital or analog recording or electronic memory capability:

- Lap tops
- PDAs
- Digital cameras
- Hard drives
- Floppy disks

Continued on next page.

Continued on next page

S.3.a. C4ISR
Recordings and
Electronic Memory
Devices (continued)

-
- Memory/flash sticks
 - CD/DVD
 - Voice and Data Recorder (VADR)
 - Voice Flight Data Recorder (VFDR)
 - Military Flight Operations Quality Assurance (MFOQA)
 - Other devices capable of recording system data in any format shall automatically assume and retain the C4ISR system classification and be marked, handled and stored IAW C4ISR system requirements and Commandant Instructions for classified media and Personally Identifiable Information (PII).

S.4. References

All C4ISR classified systems shall employ and adhere to Commandant Policy and procedures per the COMDTINST listed below:

- Classified Information Management Program, COMDTINST M5510.23 (series)
- Operations Security (OPSEC) Program, COMDTINST 5510.24 (series)
- Telecommunications Manual, COMDTINST M2000.3 (series)
- CMS Policy and Procedures Manual, CMS21A (series)
- Coast Guard Freedom of Information (FOIA) and Privacy Acts Manual, COMDTINST M5260.3 (series)
- Privacy Incident Response, Notification, and Reporting Procedures for Personally Identifiable Information (PII), COMDTINST 5260.5 (series)

S.5. C4ISR
Data, Media
and Information
Handling

Collected data, imagery, video and voice recordings must be screened to ensure no disclosure of the systems capability, compromise of military operations, assets, movements or locations, or information sensitive to U.S. foreign policy, current or future judicial process, or protected by the Privacy Act . Operational Commanders shall screen and authorize the release of C4ISR information to sources outside of the USCG IAW Commandant's policy. Material originating outside of the USCG or associated directly with joint forces operations shall have the authorization of the joint forces operational commander for release to any source outside of operation participants.

Voice recordings, a form of PII shall be protected in accordance with the Privacy Act of 1974. Unintended disclosure of PII constitutes a privacy incident and must be reported to the Commanding Officer as required by Privacy Incident Response, Notification, and Reporting Procedures for Personally Identifiable Information (PII), COMDTINST 5260.5 (series).

Commanding Officers shall establish appropriate administrative, technical, and physical safeguards to ensure the security, confidentiality, and handling of all C4ISR systems, collected information, and media. C4ISR systems shall not be exposed for public or media observation without the direct approval of the operational commander and Commandant (CG-711). Any public

Continued on next page

review or observation shall protect and preserve disclosure of the operational capabilities of the system.

Once C4ISR media is screened, sanitized and authorized for release to the public or news agencies the operational commander shall provide guidance and procedures for release through USCG Public Affairs in accordance with the Public Affairs Manual, COMDTINST M5728.2 (series).

Chapter 5

TRANSPORTATION

Introduction

The Office of Management and Budget (OMB) has issued overarching Executive Branch policy for improving the management and use of government aircraft in Circular No. A-126. In accordance with Circular No. A-126, DHS has issued MD 0020.1 (series) to provide additional guidance on the use of DHS aircraft. Consistent with these broader policy documents, this chapter provides clarifying guidance for the operation and management of Coast Guard aircraft for purposes of transportation. The DHS MD 0020.1 (series) is included in this manual as [Appendix C](#).

In this chapter

This chapter is divided into eight sections:

- Overarching Principles
 - Analytical Framework
 - Mission Requirements Use
 - Required Use
 - Transportation for the Conduct of Official Business
 - Transportation of Spouse, Dependents and Other Non-Federal Travelers
 - Special Approval and Reporting Requirements
 - Transportation of Cargo
-

Section A. Overarching Principles

A.1. General

Coast Guard aircraft shall only be used for official purposes. "Official purposes" means activity to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission, or function.

Coast Guard aircraft shall be operated in the most cost effective manner to meet operational and support requirements.

Commercial transportation shall be used for passengers and/or cargo to the maximum extent practicable.

Coast Guard aircraft shall not be used for political activities.

Transporting spouses, dependents, and other nonofficial travelers aboard Coast Guard aircraft is generally prohibited, with the exception of approved passenger transportation as authorized in this chapter.

All uses of Coast Guard aircraft must be documented, including passenger transportation approvals, and such documentation retained as part of the official flight records.

Section B. Analytical Framework

B.1. Important Questions

When analyzing a request for transportation, aboard Coast Guard aircraft, the following questions are the starting point for assessing the purpose and categories of transportation involved and the requisite approval and reporting requirements.

B.1.a.

What is the purpose of the flight?

- **What authorized Coast Guard responsibility, mission or function is being carried out?** The primary purposes of the flight must be reflected by the appropriate employment categories assigned by the commanding officer on the flight schedule.
 - **Does the flight involve the transportation of individuals or cargo from point A to point B?** If not, then the flight is something other than transportation, and alternate chapters should be consulted. (Example: if it is an orientation flight, [Chapter 4](#) should be consulted.)
 - **Is transportation the primary or secondary purpose of the flight?** The purpose of the flight will dictate the need for cost comparisons. Flights in which transportation is NOT the primary purpose of the flight require no cost comparisons with commercially available resources. Flights, in which transportation IS the primary purpose of the flight, may require cost comparison calculations and justification.
-

B.1.b.

What categories of persons are being considered for transportation?

- **Are the personnel mission essential?** When approved by the air station commanding officer, such personnel are authorized transportation to meet mission requirements. Recurring classes of mission essential personnel are described in section C of this chapter.
- **Is the person being considered for transportation a Required Use traveler?** All official travel by the Commandant, Vice Commandant and both Area Commanders has been determined by the Secretary to be Required Use transportation.
- **Is the person being considered for transportation accompanying a Required Use traveler?** Once required transportation is approved for a Coast Guard official, then transportation aboard the Coast Guard aircraft is also appropriate for staff members accompanying that official.
- **If the person being considered for transportation is NOT a Coast Guard member or federal employee, has the person been issued an invitational travel order?** Certain non-federal travelers who have been issued an invitational travel order may be approved for transportation for the conduct of official business. Non-federal travelers are subject to special approval and reporting requirements as described in section G of this chapter.

Continued on next page.

Continued on next page

B.1.b.(1) (continued)

-
- **Is the person being considered for transportation a Senior Federal Official, or the spouse or dependent of a Senior Federal Official?** Individuals, who fall within this category, including O-9s and O-10s and SES officials, are subject to special approval and reporting requirements. See section G of this chapter.
 - **Is the person being considered for transportation a Member of Congress, or spouse or staff of a member of Congress?** All requests for transportation on board Coast Guard aircraft for Members of Congress, their staffs, spouse or dependents are reviewed and approved by the DHS Assistant Secretary for Legislative Affairs. See section G of this chapter.

B.1.c.

Is the travel being conducted for official or nonofficial purposes? Travel aboard DHS aircraft is restricted to official purposes only. Coast Guard aircraft shall not be scheduled or used to satisfy personal travel desires.

Section C. Mission Requirements Use

C.1. Overview

Coast Guard aircraft are provided to support the programs which fulfill the Coast Guard's statutory responsibilities or in programs which the Coast Guard has been authorized to perform. Pursuant to the DHS Management Directive 0020.1 (series), the commanding officers of Coast Guard air stations and major cutters with aircraft embarked or deployed have the authority to approve mission requirements transportation on board Coast Guard aircraft.

Mission Requirements Use of Coast Guard aircraft means activities that constitute the discharge of DHS or the Coast Guard's official responsibilities, which may include authorized assistance to other government agencies. Mission Requirements Use include, but are not limited to, the transport of troops and/or equipment, training, evacuation (including medical evacuation), intelligence activities, law enforcement (including transport of prisoners, detainees, and illegal aliens) and search and rescue. Travel aboard DHS aircraft by any person, including personnel from the unit providing the aircraft, for purposes of attending meetings, site visits, conferences, or making speeches are examples of travel that are not mission requirements. This authority may be delegated to no lower than the operations officer. The DHS MD 0020.1 (series) uses the term duty officer to describe the lowest approval authority for Mission Requirements Use flights. In this chapter the term duty officer and operations officer are interchangeable. The term duty officer in this section should not be confused with the term senior duty officer used to describe the senior person of a SAR duty section

All Mission Requirements Use of Coast Guard aircraft shall fall within one or more employment categories for Coast Guard missions defined by the Abstract of Operations Reports, COMDTINST M3123.7 (series) or in Appendix B to the AOPS User Guide located on web site CG Central at: Resources > Applications > AOPS-TMT > User Guides.

If there is a question as to the tangible benefit a flight will offer a program, a program sponsor should be consulted. For example, flights requiring transportation for the purpose of public affairs or community awareness may include guidance by the district public affairs office or Commandant (CG-0922).

Personnel, other than flight crew members, whose presence on board Coast Guard aircraft is in direct support of the approved Mission Requirements Use for the flight may be approved as mission essential personnel (i.e., not a passenger).

Whenever there are passengers whose presence on board a Coast Guard aircraft is not in support of the approved Mission Requirements Use for the flight, such transportation shall not be approved as Mission Requirements Use, but must be analyzed under one of the other air transportation categories as prescribed in this chapter.

C.1.a. Special Approval Requirements

See Chapter 5, section G, for special approval requirements for transportation of Senior Federal Officials, spouses or dependents of Senior Federal Officials, and non-federal travelers not otherwise in an official travel status (i.e., issued Invitational Travel Orders (ITO)).

Continued on next page

**C.2. Recurring
Class of Mission
Essential
Personnel**

Commanding officers of air stations may approve the following categories of persons as mission essential personnel when they are embarked on Coast Guard aircraft in direct support of an approved Mission Requirements Use.

C.2.a. Medical
Evacuation

Patients and attendants on an approved medical evacuation (MEDEVAC) flight when the patients medical condition has been validated by a qualified Coast Guard Flight Surgeon or competent medical authority if a Coast Guard Flight Surgeon is not readily available. These individuals may not be transported, however, if either adequate care or a commercial transport service such as an air ambulance is locally available.

An immediate family member is authorized to accompany the patient as an attendant for all patients under the age of 18.

C.2.b. Assistance to
Other Agencies

Other government agency personnel on an approved mission to cooperate with or in support of federal, state or local government agencies. It is the duty of the requesting agency to provide the approving authority with adequate justification for the flight.

C.2.c. Officials and
Members of Foreign
Military Organizations

Officials and members of foreign military organizations when taking part in flights supporting operational missions.

C.2.d. Contractor
Engineering and
Technical Services
Personnel

Contractor Engineering and Technical Services (CETS) civilian personnel who are employees of commercial concerns under contract to the Coast Guard and whose official transportation is essential to accomplishing a Coast Guard mission. CETS includes Contract Field Services personnel, Field Service Representatives, Technical Representatives, and other contractor personnel.

C.2.e. Prisoners and
Guards

Prisoners and guards on an approved law enforcement or prisoner transfer mission.

C.2.f. Uniformed
Services and Coast
Guard Auxiliary
Personnel

Uniformed Services and Coast Guard Auxiliary personnel when on orders to participate in any authorized Coast Guard mission or function.

Section D. Required Use

D.1. Overview

Required Use transportation is the use of a Coast Guard aircraft for the transportation of a DHS or Coast Guard officer or employee where use of the aircraft is required because of predetermined, bona fide communications or security needs of the traveler's organization, or exceptional scheduling requirements. This category of transportation is of limited applicability and is expected to be used infrequently.

Authorization for transportation under the Required Use provision is granted either in the form of a blanket approval or on a trip-by-trip basis. Once Required Use transportation has been approved for the principal official, then using Coast Guard aircraft is also appropriate for staff members who are accompanying the official.

D.2. Blanket Approval

Blanket approval of Required Use transportation may only be granted by the Secretary of DHS. The Secretary has made an administrative determination that all official travel on Coast Guard aircraft by the Commandant, Vice Commandant, Atlantic Area Commander and Pacific Area Commander qualifies as Blanket Required Use travel.

D.3. Trip-by-Trip Approval

The Judge Advocate General (TJAG) and Deputy Judge Advocate General (DJAG) of the Coast Guard may approve trip-by-trip Required Use transportation when requested in writing and in advance, through the chain of command. The office requesting transportation must provide sufficient evidence, in the form of a memorandum, to demonstrate a bona fide communications or security need or exceptional scheduling requirements. Requests shall be routed to Commandant (CG-094) through Commandant (CG-0944). The TJAG will provide Commandant (CG-711) a copy of all written documentation approving Required Use transportation for filing with the flight record.

For other members of the Federal Government, their own respective senior legal officials or deputy must approve Required Use travel.

Section E. Other Transportation for the Conduct of Official Business

E.1. Overview

All official transportation of passengers, that is not Mission Requirements Use or Required Use transportation, must be cost justified or based upon a lack of commercial airline or aircraft service (including charter) being reasonably available. In this context, “reasonably available” means service to meet the traveler’s departure and/or arrival requirements within a 24-hour period unless the traveler demonstrates in writing that extraordinary circumstances require a shorter period.

Official transportation means authorized movement of persons in an official travel status on Coast Guard aircraft. Official travel status means a person on approved travel that is paid for, or reimbursed by, the Federal Government to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission or function.

Official Transportation of personnel from other federal, state, or local governments, to carry out an official mission or function of that agency, may also be approved under this section as Secondary Purpose Transportation. District, area and sector staffs shall obtain written documentation from the requesting agency that the transportation supports an official mission or function of that agency. See paragraph E.2.b in this section for Secondary Purpose Transportation requirements.

All transportation for the conduct of official business where the primary purpose of the flight is transportation (i.e., not a mission or required use flight) must be approved in advance and in writing at least one organizational level above the person(s) traveling, but no lower than the minimum approval levels as follows:

- Transporting passengers originating from the National Capitol Region (NCR) requires approval by the Vice Commandant.
- Transporting passengers originating from outside the NCR requires approval by the appropriate Area Commander.
- Transporting passengers originating from a Headquarters aviation unit (i.e., ATC Mobile, ARSC Elizabeth City) requires approval by Commandant (CG-711).

E.1.a. Special Approval Requirements

See Chapter 5, section G, for special approval requirements for transportation of the following categories of persons:

- Senior Federal Officials
- Spouses or dependants of Senior Federal Officials
- Non-Federal travelers, not otherwise in an official travel status

E.2. Cost Comparison requirements

In order to meet cost justification, the staff of the individual wanting to fly or the requesting agency must compare the actual cost of using the Coast Guard aircraft to the cost of using a commercial aircraft (including charter) or airline service. The actual cost of using a Coast Guard aircraft is either:

Continued on next page.

Continued on next page

E.2.a. Cost Comparison requirements (continued)

- The amount the Coast Guard will be charged by the organization that provides the aircraft or
- The variable cost of using the aircraft, if the Coast Guard operates it's own aircraft.

For aeromedical flights the cost comparison will be based solely upon the number of authorized patients and authorized attendants (i.e., approved by proper Medical Authority), but shall not include Space Available aeromedical patients.

DHS Management Directive 0020.1 (series), located in [Appendix C](#), provides detailed guidance on cost comparisons and approval requirements.

E.2.b. Secondary Purpose Transportation

All official transportation that is not Mission Requirements Use or Required Use must be cost justified. All transportation for the conduct of official business where transportation is a secondary purpose must be approved at least one organizational level above the persons(s) traveling, but no lower than the chief of staff of an area, chief of staff of a district, or sector commander. If the following criteria are met and can be certified and documented with the record of the flight, then Secondary Purpose Transportation may be authorized as cost justified. A flight is cost justified and a cost comparison is not required if

- The aircraft is already scheduled for use for an official purpose (i.e., Mission Requirements Use or Required Use).
- Additional transportation does not require a larger aircraft than needed for the official purpose.
- Additional transportation results only in minor additional cost, if any, to the Government.

E.2.c. Guidance for Managing Official Transportation Requests for Recurring Classes of Passenger

Coast Guard personnel in an official travel status, but not connected to the Mission Requirements Use of the aircraft, may be approved for secondary purpose of transportation provided that the cost justification criteria in section E.2.a. are met.

In certain circumstances the Coast Guard may support the official transportation needs of other government agencies and other non government entities as specified below:

- When requested by proper authority, the Coast Guard may transport personnel belonging to federal, state, or local government agencies participating in official missions not in support of a Coast Guard program, but in which Coast Guard support is considered essential to the mission's successful completion. The Coast Guard has authority, pursuant to 14 U.S.C. § 141(a), to utilize its personnel and facilities, including aircraft, to assist any federal agency, state, territory or possession to perform any activity for which such personnel and facilities are especially qualified.
- Continued on next page.

Continued on next page

E.2.c.(1) Guidance
for Managing Official
Transportation Requests
for Recurring Classes of
Passenger (continued)

-
- Persons engaged in disaster relief activities, including personnel associated with welfare or relief organizations, when properly requested by another government agency (e.g., transport of Red Cross personnel in support of FEMA). Requesting agencies must demonstrate organic authority to assist the nongovernmental organization.
 - Personnel associated with an authorized federal advisory committee that assists the Coast Guard to carry out an authorized responsibility, mission or function (e.g., Regional Fisheries Management Councils, Area Maritime Security Committees, Tribal/State Marine Fisheries Commissions).
 - Representatives of the media, both print and broadcast, if the transportation will provide improved media coverage while serving both the interest of the Coast Guard and the public. Transportation of members of the media representing national or international news and information services should be coordinated through the chain of command including district (dpa) for local or regional representatives in advance with Commandant (CG-0944) and info Commandant (CG-711). When space limitations preclude transporting all interested media personnel, the Public Affairs Manual, COMDTINST M5728.2 (series), should be consulted.
 - Commercial producers of features, short subject films, or television series may request participation of Coast Guard aircraft and/or transportation of personnel. The Public Affairs Manual, COMDTINST M5728.2 (series), requires such requests be referred to Commandant (CG-0922) or the Public Affairs Liaison Office (Hollywood) for approval. Once that approval has been received, the use of Coast Guard facilities and transportation of passengers may then be approved by the Commanding Officer. Personnel will be considered in the same category as media representatives.
 - Foreign nationals representing their governments while participating in exercises which offer an operational advantage to all parties. These flights shall be conducted for the sole purpose of combined operations/exercises, or familiarization/professional exchanges with the intent to develop maritime capabilities. Flights shall be in support of Assistant Commandant for Operations, International Affairs approved International Affairs initiatives, including Nation Building. This may also include transportation if it is for necessary diplomatic or public relations purposes, and is deemed in the best interest of the Coast Guard and/or the Federal Government (Area/District Commander, with concurrence of Assistant Commandant for Operations, International Affairs).
 - In polar regions, foreign nationals sponsored either by:
 - The Office of Polar Programs, National Science Foundation (NSF)
 - Commander, Naval Support Forces, Antarctic (CNSFA)
 - The program head of the agency chartering the vessel/aircraft (Commanding Officer)
-

Continued on next page

E.2.d. OCONUS
Aeromedical
Transportation

Aeromedical transportation is the transportation, pursuant to the authority of the Joint Federal Travel Regulation (JFTR), of active duty and retired service members and/or dependents stationed OCONUS for the purpose of receiving authorized medical, and in some circumstances, dental treatment. Patients in this category must be authorized by the Coast Guard medical system to receive care.

OCONUS units with sufficient authorized medical patients to meet the cost comparison requirements are authorized to approve aeromedical flights and document the flight as cost justified. When authorized, patients on aeromedical flights are an authorized recurring class of passengers under this transportation category. Aeromedical transportation flights shall not normally be conducted in conjunction with other mission requirements. Aeromedical transportation should not be confused with medical evacuations (MEDEVAC) as described in paragraph 5.C.3. of this chapter.

Specific eligibility requirements are outlined in paragraph D.2.f.

E.2.d.(1) Seating Priority

Space Required patients and attendants will have first priority for seating on the aircraft, followed by Aeromedical Space Available patients. See [Chapter 6](#) for policy concerning Space Available aeromedical patients. Any seats available after the Space Required and Aeromedical Space Available patients have been boarded may be filled by personnel qualified for travel authorized in the Military Space Available Program as described in [Chapter 6](#).

Aeromedical Space Available patients are nonofficial passengers and are approved transportation on board Coast Guard aircraft under the Military Space Available Travel program contained in [Chapter 6](#). During OCONUS aeromedical transportation flights only, Aeromedical Space Available patients are authorized priority transportation in a Space Available travel status.

E.2.d.(2) Attendants

Patients requiring assistance, based upon the determination of the competent medical authority, may be accompanied by an attendant. The attendant will also be on orders issued by the competent medical authority. The attendant will travel under the same priority as the patient (i.e., Space Required).

Patients returning to their home station are authorized transportation aboard Coast Guard aircraft under the same category in which they originally traveled to the medical facility. Patients are not required to be accompanied by their sponsor.

Continued on next page

E.2.d.(3) Eligibility Requirements

Aeromedical Space Required Patients include:

- Active duty members of the Coast Guard, Department of Defense, or U.S. Public Health Service attached to the Coast Guard
- A dependent of an active duty member of the Coast Guard, Department of Defense or U.S. Public Health Service attached to the Coast Guard

Aeromedical Space Available Patients include:

- Retired members of the U.S. Coast Guard or Department of Defense
- Dependents of retired members or deceased retired members
- Other personnel authorized care from the Coast Guard medical system

E.2.e. Record Keeping Requirements

Commanding officers of air stations conducting aeromedical transportation flights shall maintain a paper record for each aeromedical transportation flight containing the following documents:

- Hard copy of flight record printed from ALMIS
 - Hard copy of the passenger manifest
 - A copy of all documents establishing the cost justification for aeromedical transportation
-

Section F. Transportation of Spouse, Dependents and Other Non-Federal Travelers

F.1. Overview

Transporting the spouse or dependents of a Coast Guard member or employee, or other Non-Federal Travelers aboard Coast Guard aircraft is generally prohibited. There are four exceptions to this general prohibition:

- If the individual's travel is unquestionably in the best interest of the Federal Government.
- If the individual(s) traveling are in an official travel status (e.g., permanent change of station).
- If the individual(s) are authorized to travel under the Military Space Available transportation program (see [Chapter 6](#)).
- If there is space available on the aircraft and the individual(s) reimburses the Federal Government for the full coach equivalent fare.

The requirements for these four limited types of travel are set forth in paragraphs F.2 through F.5 below.

All requests for transportation of spouses, dependents and non-federal travelers under this section shall be routed through the chain of command with the following information:

- Description of the purpose of travel.
- An approved Itinerary for the trip.
- Reimbursement cost data.
- Aircraft type involved.
- Benefit to the interest of the Federal Government.

F.2. Travel is in the Best Interest of the Federal Government

Transportation of spouses, dependents, and other Non-Federal Travelers is unquestionably in the best interest of the Federal Government when the individual is providing a direct benefit or service to the Coast Guard. This travel will ordinarily be supported by an Invitational Travel Order, which allows the Federal Government to reimburse the travel expenses of the individual. Three examples of transportation unquestionably in the best interest of the Federal Government are:

- When the spouse of a Senior Federal Official is accompanying that official on a mission in which the spouse is to participate.
- When transportation of a non-federal traveler is deemed in the national interest.
- When the transportation of the spouse of a Senior Federal Official, who is accompanying that official, is desirable because of a diplomatic benefit to the country.

Continued on next page.

Continued on next page

F.2.a. Travel is in the Best Interest of the Federal Government (continued)

The Invitational Travel Order Instruction, COMDTINST 12570.3 (series), contains helpful guidance on determining whether or not an individual's travel is in the best interest of the Federal Government.

All transportation requests for individuals in this category must be routed through the chain of command to Commandant (CG-711) for approval by the Vice Commandant (CG-09) and meet the special TJAG approval and reporting requirements in section 5.G.

F.3. Individuals in an Official Travel Status

Spouses and dependents may be transported on Coast Guard aircraft when they are in an official travel status (e.g., permanent change of station (PCS) status). All transportation requests for individuals in this category must be routed through the chain of command to Commandant (CG-711), for approval by the Vice Commandant (CG-09) and meet the special TJAG approval and reporting requirements in section 5.G.

F.4. Individuals Authorized to Fly Space Available

Spouses and dependent travelers seeking transportation on Coast Guard aircraft for an unofficial purpose may be eligible to fly on a Space Available basis. Consult [Chapter 6](#) of this manual for guidance on the Space Available program.

F.5. Reimbursable Travel

When none of the criteria in paragraphs F.2 through F.4 above are met, the transportation of a spouse, dependents or other Non-Federal Travelers on board Coast Guard aircraft may be authorized so long as the following five requirements are met:

- The aircraft is already scheduled for use for an official purpose (i.e., Mission Requirements Use or Required Use).
- Such additional transportation does not require a larger aircraft than needed for the official purpose.
- Such additional transportation results only in minor additional cost, if any, to the Government.
- Reimbursement is provided at the full coach fare.
- The special TJAG approval and reporting requirements in section 5.G. are met.

All transportation requests for individuals in this category must be routed through the chain of command to Commandant (CG-711), for approval by the Vice Commandant (CG-09). When a spouse, dependent or other non-Federal traveler flies on Coast Guard aircraft on a reimbursable basis, the office responsible for coordinating his or her travel shall ensure that the individual submits payment for the coach fare equivalent of the flight. Specifically, the office responsible for coordinating the individual's travel shall:

- Calculate the commercial, full coach fare equivalent of the flight
- Notify the individual of this amount
- Instruct the individual to mail the payment, along with a description of the dates of travel, to the following address:

U.S. Coast Guard Art & Travel Fund, P.O. Box 70969 Charlotte, NC 28272-0967

Section G. Special Approval and Reporting Requirements

G.1. TJAG Approval Requirements

In accordance with DHS MD 0020.1 (series), the Judge Advocate General (TJAG) or Deputy Judge Advocate General (DJAG) must approve, in advance and in writing, all transportation on board Coast Guard aircraft of the following categories of people:

- Senior federal officials
- Spouse or dependents of Senior Federal Officials
- Non-federal travelers

This approval requirement applies irrespective of the category of transportation under which the flight is approved.

The TJAG shall provide Commandant (CG-711) a copy of all written documentation approving transportation of the passengers.

Route all requests via the chain of command to the Commandant (CG-00) through the Office of General Law Commandant (CG-0944). For Senior Federal Officials outside the Coast Guard, the senior legal official or deputy of DHS, the respective DHS Organizational Element, or other Department of the Federal Government, must approve the transportation of that official on board Coast Guard aircraft. It is the responsibility of the Coast Guard directorate coordinating the flight to provide Commandant (CG-711) with written documentation approving the transportation of all personnel outside the Coast Guard.

In special emergency situations, an after-the-fact written approval by the TJAG is permitted. Notify Commandant (CG-711) and Commandant (CG-0944) of circumstances where advance written approval can not be coordinated, as soon as practicable.

G.2. Disclosure Statement Requirements

In accordance with the Federal Travel Regulations, specifically 41 C.F.R. § 301-70.909, civilian employees and passengers who have been issued an ITO shall be provided a copy of the disclosure statement contained in [Appendix K](#).

G.3. Congressional Transportation

Coast Guard aircraft may be used for the transportation of Congressional travelers when such usage is in the best interest of the Federal Government. All request for transportation on Coast Guard aircraft for Members of Congress, their staffs, spouse and/or dependents, regardless of the purpose of the flight, shall be reviewed and approved only by the DHS Assistant Secretary of Legislative Affairs. Refer all requests to Commandant (CG-0921) via the most expeditious means. Commandant (CG-0921) will review and forward recommendations through Commandant (CG-711) to the Vice Commandant (CG-09) for endorsement. Once endorsed, the request will be sent for final approval to DHS Office of Legislative Affairs.

Continued on next page.

Continued on next page

G.3.a. Congressional Transportation (continued)

Commandant (CG-0921) will require the following information to process the request: date request received, originator of the request, date/location of flight, type of aircraft to be used, name and titles of personnel participating, purpose of the flight, flight plan, principal Coast Guard units/personnel involved, Coast Guard personnel escorting delegation, benefit to the Coast Guard and Federal government, impact of denial, POC for air station and Congressional Staff.

Commandant (CG-0921) shall provide a written record of the DHS flight approval to Commandant (CG-711) for filing with the flight records in accordance with DHS MD 0020.1 (series).

NOTE

This section delineates the approval process for Congressional transport aboard Coast Guard aircraft. The authorization of the flight is a separate approval process (see sections C and D of this chapter) and must be determined in addition to the approval to transport Congressional travelers in this section.

G.4. Reporting Requirements

In accordance with paragraph VI.B.1.c of DHS MD 0020.1 (series), Coast Guard air stations shall submit to Commandant (CG-711) a semiannual report detailing all transportation, deemed not Mission Requirements Use, on Coast Guard aircraft, of DHS or Coast Guard Senior Federal Officials, their spouses, dependents and any non-federal travelers. Air stations shall also report any Mission Requirements Use transportation by Senior Federal Officials

This semiannual report is due to Commandant (CG-711) by 15 January and 15 July.

G.5. Record Keeping Requirements

Commandant (CG-711) shall maintain a record for each flight on which a Senior Federal Official, the spouse or dependent of a Senior Federal Official, or a non-federal traveler (not on an ITO) is transported on board Coast Guard aircraft. The records shall be retained for seven years, in accordance with the Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). The record shall contain the following documents:

- Copy of the passenger manifest
- Copy of all documents approving the transportation of such passengers on the flight
- Copy of Required Use cost justification and cost comparison where appropriate

Headquarters, Area or District offices that coordinate flights under section E of this chapter shall forward all documentation of cost justification to Commandant (CG-711). Air stations will provide Commandant (CG-711) a copy of the flight record and all passenger manifests.

Section H. Transportation of Cargo

H.1. Overview

Each use of Coast Guard aircraft to transport cargo must be justified, documented, and approved in accordance with this chapter. Commercial airlines or services, including charters, shall be relied upon to the maximum extent practicable. The use of these external services must economically and effectively meet the cargo transportation requirements. Coast Guard aircraft may be used to transport cargo when these external services are unable to do so.

H.2. Mission Essential Cargo

Mission essential cargo is cargo transported on the aircraft in direct support of Mission Requirements Use. Carrying of mission essential cargo is not considered transportation; it is considered operational use of the aircraft. Coast Guard aircraft may be used for the primary or secondary purpose of transportation of cargo in support of emergencies and/or disasters.

H.3. Transportation of Non-Mission Essential Cargo as the Primary Purpose of Flight

Coast Guard aircraft may be used for the transportation of non-mission essential cargo as the primary purpose of flight whenever the variable cost of using a Coast Guard aircraft is not greater than the cost of using commercial airlines or aircraft services, including charters.

Coast Guard aircraft may also be used when it is not cost effective if the commercial airlines or aircraft services are not reasonably available. Justification shall be provided with the CG-4377, Aircraft Flight Record - part II.

In no event shall cargo transportation be the basis for establishing primary mission requirements nor shall minimum mission requirements be exceeded because of the cargo.

H.4. Transportation of Cargo as the Secondary Purpose of Flight

Coast Guard aircraft may be used for the transportation of cargo as the secondary purpose of flight whenever the aircraft is being used primarily for some other bona fide mission or training requirement. In all instances, such use must be in the best interest of the Federal Government and must not interfere with the performance of the primary purpose of the flight.

In no event shall cargo transportation be the basis for establishing primary mission requirements nor shall minimum mission requirements be exceeded because of the cargo.

H.5. Privately Owned Vehicles

The transportation of privately owned/leased vehicles, including automobiles, motorcycles and boats, is prohibited.

Continued on next page

H.6. Cargo Inspection and Hazardous Cargo Handling and Regulation

Cargo may be inspected, regulated, or prohibited for safety-of-flight reasons by commanding officers of aviation units or by pilots in command of flights. AFMAN 24-204, Preparing Hazardous Materials for Military Air Shipment, shall apply to all cargo carried in Coast Guard aircraft, including mission essential cargo. Requests for waivers to deviate from this guidance shall be submitted in writing to Commandant (CG-711).

Once the potential for risk versus the gain has been considered, area/district commanders having operational control (OPCON) of aircraft are delegated the authority to invoke the provisions of [Chapter 3](#) of AFMAN 24-204 as necessary to meet unplanned response requirements.

It is recommended, if possible, that all mission essential cargo of questionable or unknown origin, or not adequately provided for in AFMAN 24-204, be shrink wrapped as a precaution against contamination of both the aircraft and crew. Shrink wrapping does not relieve crews from complying with the provisions of AFMAN 24-204.

NOTE

Flammable materials such as diesel fuel may be transported without a waiver for contingency operations if DHS approved containers are used. Otherwise, the operational commander of the aircraft must approve the transport under contingency operations as discussed.

H.7. Cost Comparisons

A cost comparison for the transportation of cargo is not required when Coast Guard aircraft are used in accordance with Mission Requirements Use criteria. Cost comparisons are unnecessary as well when cargo is transported as a secondary purpose of flight in conjunction with a bona fide primary purpose of flight.

A cost comparison is required when cargo is to be transported as a primary purpose of flight for other than Mission Requirements Use purposes. Reimbursement, if required, shall be in accordance with DHS Management Directive 0020 (series), located in [Appendix C](#).

Chapter 6

MILITARY SPACE AVAILABLE TRAVEL

Introduction

This chapter provides guidance on Military Space Available Travel.

In this chapter

This chapter is divided into four sections:

- USCG Military Space Available Travel Program
 - General Guidelines
 - Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments
 - Environmental and Morale Leave Program
-

Section A. USCG Military Space Available Travel Program

A.1. Overview

Title 10 USC §§ 2648-2651 authorizes a Military Space Available Travel Program. The statute is used as a guide for the Coast Guard Military Space Available Travel program. There may be minor difference between the Coast Guard and the DOD Military Space Available Travel programs. In those instances when the Coast Guard has chosen not to adopt new DOD policy an individual may be eligible to fly in new category on DOD aircraft and may not have the same privilege on Coast Guard aircraft.

The USCG Military Space Available Travel Program covers routine military space available travel and the Environmental and Morale Leave (EML) Program. Commanding officers of Coast Guard air units are authorized to approve and carry space available passengers in Coast Guard aircraft in accordance with the priority categories and conditions prescribed in this section.

For passenger transportation for other than the recurring classes of passengers eligible for space available transportation discussed in this chapter, requests shall be sent via the chain of command to Commandant (CG-711) for review and forwarding to the Vice Commandant on a case-by-case basis for approval.

Section B. General Guidelines

B.1. Eligibility

Military space available travel is limited to active duty and retired U.S. Uniformed Services personnel and their dependents, U.S. Uniformed Service reserve personnel, foreign military personnel on exchange duty with U.S. military components and their dependents, American Red Cross personnel assigned to U.S. military installations overseas, and U.S. citizen civilian employees of the Coast Guard, DHS, or DOD, stationed overseas only in those specific circumstances listed in this chapter.

Space available travel is a privilege (not an entitlement) that accrues to Uniformed Services members as an avenue of respite from the rigors of Uniformed Services duty. Retired Uniformed Services members are given the privilege in recognition of a career of such rigorous duty and because they are eligible for recall to active duty. The underlying criterion for extending the privilege to other categories of passengers is their support to the mission being performed by Uniformed Services members and to the enhancement of active duty service members' quality of life.

B.2. Type of Travel

Transportation under this program is for nonofficial travel.

B.3. Cost and Reimbursement

Cost comparison and reimbursement is not required, unless otherwise specified herein.

B.4. Dependents

Dependents are not eligible for military space available flights within CONUS except where specifically authorized in this chapter.

NOTE

All individuals otherwise eligible for military space available transportation will be allowed to travel on aircraft to/from an overseas location when a CONUS leg segment (en route stop) is involved. For example, dependents may travel on a mission which operates from Kodiak to Elizabeth City even though an en route stop is made in Sacramento. Similarly, dependents may travel on a mission which operates from Elizabeth City to Borinquen even though an en route stop is made in Miami.

B.5. Aircraft

Only multi-engine Coast Guard aircraft may carry military space available passengers, and if carrying dependents, such aircraft shall be appropriately equipped to accommodate their needs.

B.6. Affecting Mission

Military space available transportation must not alter the schedule of the flight or the basic mission. In no event will military space available transportation serve as the basis for establishing mission requirements.

Continued on next page

B.7. Required Documentation

Active duty military members on ordinary leave are required to have a valid leave authorization as prescribed by their Service and a military ID card. Retired military personnel are required to present DD Form 2 (Blue or Gray).

Bona fide dependents accompanying eligible active duty and retired members need present only their DD-1173, Uniformed Services Identification and Privilege Card, if issued. Active duty military members in a liberty status without orders may travel on Coast Guard aircraft upon presentation of a DD Form 2 (Green), Armed Forces Identification Card, and necessary border clearance documentation when required.

Personnel holding the Congressional Medal of Honor need to present a Medal of Honor Identification and Travel Card.

All other individuals must present travel orders or a transportation authorization for which an authenticating officer has authorized the travel.

B.8. Passenger Registration

Military space available passenger registers shall be maintained to those destination/en route points served by scheduled logistics flights. Registered passengers must be in a leave status and available to travel. Passengers who fail to accept a seat or who are not available to accept a seat when it is offered to any of their registered destinations on a flight whose scheduled departure has been posted for 24 hours will have their names removed from the register. Anyone whose name is removed may re-register, but will be placed at the bottom of the appropriate category on the register.

B.9. Prioritization and Availability

Eligible personnel are listed within each priority group of a category in no particular order and will be furnished space available transportation on a first-in, first-out basis within each priority group. All personnel in a higher priority group of a category will be offered transportation before anyone in a lower priority group of the same category is offered transportation.

The air station commanding officer may change the precedence for emergency or extreme humanitarian reasons, when requested by the sponsoring military service and the facts provided fully support such exception.

Reservations will not be made for any category of space available passenger, however, air stations may maintain a roster of applicants as a means of identifying such passengers. There is no guaranteed space for military space available passengers, nor is the Coast Guard obligated to continue an individual's travel or return him/her to his/her point of origin.

Eligible personnel must be physically capable of caring for themselves while enplaning, deplaning, and in-flight. An exception to this is permitted when a disabled individual is accompanied by a sponsor or dependent who is also eligible for military space available transportation and who can provide the assistance required.

Continued on next page

B.10. Space Available Travel in Conjunction with Space Required Travel or to Restricted Tour Areas

Space available travel may not be used instead of space required travel for such movement as TDY, TAD, or PCS travel. Space available travel may be used in conjunction with space required travel as long as space available travel does not substitute for any single leg for which the traveler has a space required entitlement. For example, a Uniformed Services member may take leave with a TDY or TAD, as allowed by Service regulations, and may travel space available while on leave. Travel from the Primary Duty Station (PDS) to the TDY or TAD location shall be space required with the traveler in a duty status; any space available travel from the TDY or TAD duty location shall return to the TDY or TAD location, with the traveler in a leave status; and the final leg shall be space required from the TDY or TAD location to the PDS with the traveler in a duty status. Dependents may not use space available travel options in this regulation to accompany their sponsor on space required travel or to travel from a sponsor's restricted or any other unaccompanied tour location.

Section C. Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments

C.1. Overview

Table 6-1 is based on DOD 4515.13R, [Chapter 6](#), Space Available Travel. This table lists travelers who are eligible to travel on DOD aircraft according to the space available program outlined in the following paragraphs. "Traveler's Status and Situation" lists specific travelers and conditions under which space available travel may be authorized.

The approved geographical travel segments (i.e., origin and destination combinations) are C-C (CONUS to CONUS), O-O (overseas to overseas), C-O (CONUS to overseas), and O-C (overseas to CONUS) (see paragraph A.8.).

A "yes" in the column headed by one of these abbreviations indicates that travel is authorized in that particular geographical travel segment for the particular type traveler cited in that item number, and subject to any limitations cited. Lack of a "yes" indicates travel is not authorized in that particular geographical travel segment.

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
Category 1				
Emergency Leave Unfunded Travel				
Transportation by the most expeditious routing only for bona fide immediate family emergencies, as determined by DOD Directive 1327.5 (reference (d)) and Service regulations, for the following travelers:				
1.1	Uniformed Services members with emergency status indicated in leave orders	Yes		
1.2	Civilians, U.S. citizens, stationed overseas, employees of: (1) The Uniformed Services; or (2) NAF activities and whose travel from the CONUS, Alaska, or Hawaii was incident to a PCS assignment at NAF expense		Yes	Yes
1.3	Dependents of members of the Uniformed Services when accompanied by their sponsor		Yes	
1.4	Dependents, accompanied or unaccompanied, of members of the Uniformed Services who are assigned and domiciled in the CONUS.			Yes
1.5	Dependents of members of the Uniformed Services, non-command sponsored, residing overseas with the sponsor, one-way only to emergency destination		Yes	C-O Yes O-C No
1.6	Dependents, command sponsored, of: (1) U.S. citizen civilian employees of the Uniformed Services stationed overseas; (2) U.S. citizen civilian employees of the DOD stationed overseas and paid from NAF; or (3) American Red Cross full-time, paid personnel, serving with a DOD Component overseas		Yes	Yes
1.7	Professional Scout Leaders, and American Red Cross full-time, paid personnel, serving with a DOD Component overseas		Yes	Yes
1.8	Dependents of retired Uniformed Services members who die overseas. Travel is authorized for the purpose of accompanying the remains of the deceased retired member from overseas to the CONUS. Return travel is authorized if accomplished within one year of arrival in the CONUS. Documentation certified by DOD mortuary affairs personnel shall be presented to air terminal personnel, and shall be in the dependents' possession during travel.			Yes

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
Category 2				
Environmental and Morale Leave (EML)				
<p>EML leave is granted with an EML program, as prescribed in DOD Directive 1327.5 (reference (d)), established at an overseas installation where adverse environmental conditions require special arrangements for leave in more desirable places at periodic intervals. Except as noted, unfunded EML travel is subject to the space available program rules and guidance outlined in DOD 4515-13R, Chapter 6, section A. Funded EML travel is discussed in DOD 4515-13R, sections B.1.e.B.3.a.(14). Unfunded EML travelers may travel in Category II status to only one EML destination for each set of EML orders. This does not preclude several approved EML destinations being included in a single set of EML orders as long as procedures are in effect to ensure that the individual is provided Category II status only for travel to and from the first authorized EML destination actually reached. Subsequent space available travel, e.g., from the EML destination to a third location and return, or from the third location to another EML location, may only be provided in Category III status. When traveling under EML orders, dependents who are 18 years of age or older may travel unaccompanied by their sponsor. Dependents who are under 18 years of age traveling under EML orders must be accompanied by an EML eligible parent or legal guardian who is traveling in an EML status.</p>				
2.1	<p>Sponsors in an EML status and their dependents traveling with them, also in an EML status. "Sponsors" includes:</p> <p>(1) Uniformed Services members.</p> <p>(2) U.S. citizen civilian employees of the Armed Forces who are eligible for Government funded transportation to the United States at tour completion (including NAF employees).</p> <p>(3) American Red Cross full-time, paid personnel on duty with a DOD Component overseas.</p>		Yes	Yes
	<p>(4) USO professional staff personnel on duty with the Uniformed Services.</p> <p>(5) DODDS teachers during the school year and for employer approved training during recess periods.</p>		Yes	Yes
Category 3				
Ordinary Leave, Close Blood or Affinitive Relatives, House Hunting Permissive TDY/TAD, Medal of Honor Holders, Foreign Military, and Others				
3.1	<p>Uniformed Services members in a leave or pass status other than emergency leave (use Category I), environmental and morale leave (use category II), or excess appellate leave, for which space available travel is not authorized. This includes members of the Reserve components on active duty, in a leave or pass status.</p>	Yes	Yes	Yes

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
3.2	Dependents of a member of the Uniformed Services when accompanied by their sponsor in a leave status other than emergency leave (use Category I), environmental and morale leave (use Category II), or excess appellate leave, for which space available travel is not authorized.		Yes	Yes
3.3	Close blood or affinitive relatives who are permanent members of the household and dependent upon a Military Service member, a DOD civilian employee, or American Red Cross employee serving with a DOD Component overseas, when the sponsor is authorized transportation of dependents at Government expense. Travel must be with the sponsor's or his or her dependent's PCS move.		Yes	Yes
3.4	Dependent spouses of military personnel officially reported in a missing status under 37 USC 551, and accompanying dependent children and parents, when traveling for humanitarian reasons and on approval on a case-by-case basis by the Head of the Service concerned (Chief of Staff of the Army, the Chief of Naval Operations, the Commandant of the Coast Guard, the Chief of Staff of the Air Force, and the Commandant of the Marine Corps) or their designated representative. Travelers shall present an approval document from the Service concerned.	Yes	Yes	Yes
3.5	Uniformed Services members traveling under permissive TDY/TAD orders for house hunting incident to a pending PCS.	Yes	Yes	Yes
3.6	One dependent when accompanying a Uniformed Services members traveling under permissive TDY/TAD orders for house hunting incident to a pending PCS.	Yes	Yes	Yes
3.7	Medal of Honor recipients. Except for active duty, traveler shall present a copy of the Medal of Honor award certificate.	Yes	Yes	Yes
3.8	Dependents of Medal of Honor recipients when accompanied by their sponsor.		Yes	Yes

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
3.9	Command sponsored dependents of Uniformed Services members accompanying their sponsor on approved circuitous travel. Commanders authorized to publish circuitous travel orders for members under current policy of their Uniformed Service, where extenuating circumstances prevail, may approve requests for space available travel of their dependents within and between overseas areas and the CONUS, incident to approved circuitous travel of the member.		Yes	Yes
3.10	Foreign cadets and midshipmen attending U.S. Service academies, in a leave status. Native countries of foreign cadets and midshipmen must be identified in the leave authorization.			Yes
3.11	Civilian U.S. Armed Forces patients who have recovered after treatment in medical facilities and their accompanying nonmedical attendants. Travel is permitted by the most expeditious routing to return the recovered patient and nonmedical attendant to the overseas post of assignment. (During the death or extended hospitalization of the patient, the nonmedical attendant retains the space available travel authority to return to the patient's overseas post of assignment.		Yes	C-O Yes O-C No
3.12	Foreign exchange Service members on permanent duty with the Department of Defense, when in a leave status.	Yes	Yes	Yes
3.13	Dependents of foreign exchange Service members on permanent duty with the Department of Defense when accompanying their sponsor.		Yes	Yes
Category 4				
Unaccompanied Dependents on EML and DODDS Teachers on EML During Summer				
4.1	Dependents traveling under the EML Program, unaccompanied by their sponsor, traveling under subsection B.4.c. ("Sponsor" as defined in item 10)		Yes	Yes
4.2	DODDS teachers or dependents (accompanied or unaccompanied) traveling under the EML Program during the summer break.		Yes	Yes
Category 5				
Permissive TDY (Non-house Hunting), Foreign Military, Students, Dependents, and Others				
5.1	Military personnel traveling on permissive TDY/TAD orders other than for house hunting.	Yes	Yes	Yes

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
5.2	<p>Dependents (children) who are college students attending in residence an overseas branch of an American (U.S.) university located in the same overseas area in which they reside, command sponsored, stationed overseas with their sponsor who is:</p> <p>(1) A member of the Uniformed Services;</p> <p>(2) A U.S. citizen civilian employee of the Department of Defense (paid from either appropriated funds or NAF); or</p> <p>(3) An American Red Cross full-time, paid employee serving with the Department of Defense. Unaccompanied travel is permitted from the overseas military passenger terminal nearest their sponsor's permanent duty station to the overseas military passenger terminal nearest the university, and to return during school breaks. Students must present written authorization from an approving authority and only one round trip each year is authorized. Unused trips may not be accumulated from school year to school year.</p>		Yes	
5.3	<p>Dependents, command sponsored, stationed overseas with their sponsor who is:</p> <p>(1) A member of the Uniformed Services;</p> <p>(2) A U.S. citizen civilian employee of the Department of Defense (paid from either appropriated funds or NAF); or</p> <p>(3) An American Red Cross full-time, paid employee serving with the Department of Defense. Unaccompanied travel is permitted to and from the nearest overseas military academy testing site to take scheduled entrance examinations for entry into any of the U.S. Service academies.</p>		Yes	
5.4	<p>Dependents of active duty U.S. military personnel stationed overseas who, at the time of PCS, were not entitled to transportation at Government expense. Travel is to accompany or join their sponsor at his or her duty station. Travel may be unaccompanied and is limited to travel from the APOE in the CONUS, Alaska, or Hawaii to the overseas APOD serving the sponsor's duty station. Before travel, approval of the overseas major commander is required.</p>			C-O Yes O-C No

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
5.5	Non-command sponsored dependents, acquired in an overseas area during a military member's current tour of assigned duty, not otherwise entitled to transportation at Government expense. Travel must be with the member's PCS, may be unaccompanied, and is limited to travel from the overseas APOE to the APOD in the CONUS, Alaska, or Hawaii. Member's PCS orders are required for travel. Command regulations pertaining to the acquisition of dependents must have been followed.			C-O Yes O-C No
5.6	Unaccompanied spouses of Uniformed Services members stationed in overseas areas in response to written requests from school officials or when deemed essential, authorized, and directed in writing by the sponsor's commander for personal consultation on matters about the needs of family members attending school at an overseas location away from the Uniformed Service member's PDS.		Yes	
5.7	Command-sponsored dependents of Uniformed Services members, accompanied or unaccompanied, who are stationed overseas. Travel restrictions may apply to certain overseas destinations as determined by the appropriate unified commander. Documentation signed by the sponsor's commander verifying command sponsorship shall be presented to air terminal personnel, and shall be in the dependents' possession during travel. This documentation is valid for one round trip from sponsor's PCS duty location. Dependents under 18 years of age must be accompanied by an eligible parent or legal guardian.		Yes	Yes
Category 6				
Retired, Dependents, Reserve, ROTC, NUPOC, and CEC				
6.1	Retired Uniformed Services members.	Yes	Yes	Yes
6.2	Dependents of retired Uniformed Services members, when accompanying their sponsor.		Yes	Yes

Continued on next page

Eligible Space Available Travelers, Priorities, and Approved Geographical Travel Segments				
Reference Number	Traveler's Status and Situation	C-C	O-O	C-O and O-C
6.3	<p>Dependents, command sponsored, stationed overseas with their sponsor who is:</p> <p>(1) A member of the Uniformed Services;</p> <p>(2) A U.S. citizen civilian employee of the Department of Defense (paid from either appropriated funds or NAF); or</p> <p>(3) An American Red Cross full-time, paid employee serving with the Department of Defense. Unaccompanied travel is permitted to the U.S. for enlisting in one of the Armed Forces when local enlistment in the overseas area is not authorized. If an applicant for Military Service is rejected, return travel to the overseas area may be provided under this eligibility.</p>		Yes	Yes
6.4	<p>Authorized Reserve component members and authorized Reserve component members entitled to retired pay at age 60, traveling in the CONUS and directly between the CONUS and Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, Guam, and American Samoa (Guam and American Samoa travelers may transit Hawaii or Alaska); or traveling within Alaska, Hawaii, Puerto Rico or the U.S. Virgin Islands.</p>	Yes		
6.5	<p>NUPOC, CEC, and ROTC students of the Army, Navy or Air Force receiving financial assistance or enrolled in advanced training, in uniform, during authorized absences from the school. Travel is authorized within and between the CONUS, Alaska, Hawaii, and the U.S. territories.</p>	Yes		
6.6	<p>Newly commissioned ROTC officers who are awaiting call to extended active duty. Travel is authorized within and between the CONUS, Alaska, Hawaii, and the U.S. territories.</p>	Yes		

Section D. Environmental and Morale Leave Program

D.1. Overview

District commanders are authorized to establish Environmental and Morale Leave (EML) programs subject to approval by Assistant Commandant for Operations (ACO). Whenever such EML programs encompass travel via Coast Guard aircraft, the provisions of this section are applicable and prior approval of the district's governing instruction and any changes to that instruction by Assistant Commandant for Operations (ACO) are required. EML participants are authorized to travel on a space available basis (Category II, Priority 2; Category IV, Priority 2) aboard those Coast Guard aircraft which meet the criteria for carrying space available passengers. Travel may be to any location served by Coast Guard aircraft. Travel within CONUS under an EML program is prohibited.

D.2. Policy

D.2.a. Annual Leave

Annual leave programs are conducted to provide periods of respite from the working environment to enhance performance, motivation, and morale.

Where adverse environmental conditions exist which would offset the full benefit or ordinary leave programs, supplemental programs are necessary. Therefore, military personnel and/or their dependents who are stationed at designated overseas activities may be provided air transportation privileges on a space available basis for purposes of taking ordinary leave in a more desirable location.

D.2.b. Travel Opportunities

Travel opportunities will be afforded on an equitable basis to officer and enlisted personnel and their accompanying dependents without regard to rank, grade, or branch of service.

D.2.c. Coast Guard Aircraft

Coast Guard aircraft will not be scheduled primarily for this program, and the privilege extended by the provisions of this section must not result in more than minor additional cost in funds for flying hours to the government.

D.2.d. Restrictions

Participants are restricted to two trips per year.

D.2.e. Status

Military members must be in a leave status.

D.2.f. Other Restrictions

Theater or international restrictions shall be complied with.

D.2.g. Travel Documentation

All directives and requirements pertaining to passports, visas, foreign customs, and immunizations shall be complied with.

D.2.h. Funding

Participants shall have sufficient personal funds available to defray the cost of the return trip to home base via commercial transportation if space available transportation cannot be provided.

Continued on next page

D.2.i. Baggage

Participants shall not exceed the maximum baggage allowance of 50 pounds per passenger. Excess baggage will not be accepted. Pets are not authorized.

D.3. Designated Overseas Areas

EML travel is limited to those eligible personnel stationed in the following geographical areas:

D.3.a. Alaska

All of Alaska except for the immediate vicinity of Anchorage.

D.3.b. Pacific

American Samoa, Guam, Japan, Iwo Jima, Marcus Island, Johnston Island, Wake, Saipan, Yap, Midway, Kure, Manila, and Okinawa.

D.3.c. Atlantic

Guantanamo Bay, Cuba, and all locations within the defined limits of the Greater Antilles Section.

D.4. Authorized Personnel

Personnel in the following groups are eligible for EML travel. All personnel will be governed by a single directive issued by the district commander responsible for the geographical area:

All active duty Uniformed Services personnel, without regard to grade, accompanied or unaccompanied.

Accompanied or unaccompanied, command sponsored dependents of active duty members. Dependents under age 13 traveling under this provision must be accompanied by a parent or guardian.

Full-time paid personnel of the American Red Cross serving with the U.S. Armed Forces at a designated overseas activity.

U.S. citizen civilian employees of the Coast Guard, DHS or DOD stationed overseas.

D.5. Administrative Control

District commanders shall ensure that the administrative controls permit all eligible military personnel and dependents to participate.

This Page Intentionally Left Blank

Chapter 7

PERSONAL PROTECTIVE EQUIPMENT AND SURVIVAL SYSTEMS

Introduction

Adequate personal protective equipment and survival systems are required to allow Coast Guard aviation to meet its many operational commitments in a wide variety of environmental conditions. This chapter provides guidance for use of personal protective equipment and survival systems and supplements the Aviation Life Support Systems Manual, COMDTINST M13520.1 (series).

In this chapter

This chapter is divided into five sections:

- Protective Clothing
 - Flotation Equipment
 - Oxygen
 - Safety Devices
 - Minimum Rescue/Survival Equipment
-

Section A. Protective Clothing

A.1. Overview

Use of equipment other than the items specified in the Aviation Life Support Systems Manual, COMDTINST M13520.1 (series), is prohibited unless specifically authorized by Commandant (CG-711). Coast Guard issued Personal Protective Equipment (PPE) is to be used for flight related missions.

Commanding officers shall submit suggestions for new equipment or improvements to Commandant (CG-711) for Aircraft Configuration Control Board (ACCB) evaluation.

Personal protective equipment issued to aviation personnel shall be inspected annually and when reporting aboard a new unit.

The Coast Guard Air Station AST shop is responsible for managing aviation PPE programs at the unit. The AST Shop is a good resource for answering aviation PPE related questions.

A.2. Flight Clothing Modification and Maintenance

Policies and instructions pertaining to the modification, maintenance, configuration, application, function, and inspection of rescue and survival equipment are contained in the Aviation Life Support Systems Manual, COMDTINST M13520.1 (series).

A.3. Flight Clothing

All crew members in Coast Guard aircraft, including those serving with the Coast Guard on exchange, shall use protective clothing as follows:

NOTE

Further guidance for mission essential personnel is found in [Flight Safety for Non-Aircrew Coast Guard Personnel Instruction, COMDTINST 3700.1 \(series\)](#).

A.3.a. Flight Suits and Boots

Aircrew personnel shall wear fire retardant flight suits or anti-exposure coveralls and flight boots when engaged in all ground and in-flight operations. To provide maximum fire protection, sleeves shall not be rolled up. Mission essential personnel and passengers should wear fire retardant flight suits for operational, non-transport missions.

NOTE

Rescue swimmers (RSs) may wear the required water ensemble during flight. Water ensembles are not specifically designed for flame resistance and can cause heat stress to the RS.

NOTE

Aircraft commanders must consider the risks of performance degradation and lack of flame protection versus practicality when permitting the RS to wear a water ensemble for periods longer than 30 minutes.

Continued on next page

A.3.b. Flight Gloves

Rotary wing (R/W) flight crews shall wear gloves when engaged in all ground and flight operations. Multi-engine fixed wing (ME/F/W) flight crews shall wear gloves during all ground operations, takeoffs, and landings. Mission essential personnel and passengers should wear fire retardant flight gloves for operational, non-transport missions.

A.3.c. Flight Helmets

For R/W aircraft, aircrew members within close proximity to a turning rotor system, including persons being hoisted, shall wear a helmet. The eye protecting visor shall be used to the maximum extent. Rescue swimmers shall wear a helmet during deployment. Rescue swimmers are exempt from this requirement during deployment to, and recovery from, the water. Aircrew members and mission essential personnel are exempt from this requirement when administering medical attention.

Mission essential personnel and passengers on R/W aircraft engaged in operational, non-transport missions should be provided a flight helmet or the HGU-25/P helmet assembly as cranial protection. In addition, mission essential law enforcement personnel are authorized to wear the tactical ballistic helmet. Wearing helmets is optional for aircrew members, mission essential personnel, and passengers aboard F/W aircraft, however, C-130 Dropmasters (DMs) and personnel assisting in drops must wear helmets during drop operations.

A.3.d. Anti-Exposure Garments

A.3.d.(1) Requirements

Anti-exposure garments shall be worn by each aircraft occupant (except survivors/patients embarked during search and rescue (SAR)) during all R/W operations beyond autorotative distance from land as determined by table 7-1.

Only authorized anti-exposure garments shall be worn by aircrew members. Other anti-exposure garments may be worn by mission essential personnel and passengers (i.e., MAC-10, Mustang).

A.3.d.(2) Deviations

Commanding officers may authorize deviation from the requirements of the anti-exposure garment tables of this chapter on a case-by-case basis, after a determination that the risks associated with crew performance degradation, thermal stress, and environmental considerations are offset by the benefits associated with the deviation.

Blanket deviation is not authorized. If a flight crew member's frame size and body fat percentage cause heat tolerance and performance degradation problems when complying with these tables, the commanding officer may request a waiver from Commandant (CG-711).

A.3.d.(3) Authorized Anti-Exposure Garments

Continued on next page

A.3.d.(3)[a] Aircrew Dry Coverall (ADC)

An ADC is a gortex/nomex full dry suit worn in place of flight suit. It includes 4 levels of undergarments, wet suit mitts, and hood or surf cap. Hood and mitts shall be carried in the suit at all times.

A.3.d.(3)[b] Survival Suit

A survival suit is a closed-cell, foam insulated dry immersion suit which may be carried in the aircraft for post-egress wear. Although ME/F/W crews may wear this suit during flight, R/W aircraft crews are prohibited from wearing it because of the hazard involved in an inverted egress.

Table 7-1

Water Temp (W)		Air Temp (A)	Garment
70° F ≤ W	and	Any	Flight Suit
60° F ≤ W < 70° F	and	85° F ≤ A	Flight Suit
60° F ≤ W < 70° F	and	A < 85° F	ADC
W < 60° F	and	Any	ADC

A.3.e. Underwear and Socks

The wearing of synthetic fabrics under flight gear may cause severe skin injury during a fire. Underwear and socks shall conform with the following:

- 100% cotton or Nomex blend crew neck or V-neck T-shirt. Aircrew dry coverall undergarment must consist of Nomex blend, multiclimatic protection system or commercial equivalent.
- Socks: at least 80% cotton; or at least 80% wool.

NOTE

In cold climates, cotton long underwear and socks will absorb perspiration and make the person subject to chill, hypothermia, and frostbite.

NOTE

Rescue Swimmers in dry suits may wear any of the long underwear choices listed in the Helicopter Rescue Swimmer Manual, COMDTINST M3710.4 (series).

Section B. Flotation Equipment

B.1. Personal Flotation Device

All aircraft shall carry one Personal Flotation Device (PFD) for each person on board.

NOTE

Water activated automatic inflatable vests shall not be worn aboard Coast Guard aircraft. Automatic inflatable vests shall not be transported aboard Coast Guard aircraft unless they are disarmed.

B.2. Multi-Engine Fixed Wing Aircraft

Occupants of ME/F/W aircraft are not normally required to wear flotation devices. The use of flotation devices shall be a decision made on a case-by-case basis by the aircraft commander or the command. If the LPP-1 is worn, the yoke shall be placed around the neck.

B.3. Rotary Wing Aircraft

R/W aircrew members shall wear the survival vest during all flight operations. All other occupants of R/W aircraft shall wear a life vest when the aircraft is operated over water beyond safe autorotative distance from land. If the LPP-1 is worn, the yoke shall be placed around the neck.

B.4. Minimum Contents of Survival Vests

The Aviation Life Support System Manual, COMDTINST M13520.1 (series), specifies minimum contents of the survival vest. Commanding officers may require additional items to meet local conditions with the approval of Commandant (CG-711).

NOTE

The survival egress air equipped survival vest may be used as a personal flotation device, but not as an egress breathing device by personnel who have not completed the initial and recurrent shallow water egress training (SWET) required in [Chapter 8](#) of this manual. The survival egress air equipped survival vest shall not be installed or worn on F/W aircraft. If not current, R/W crews must complete SWET within 60 days of arrival at a unit.

Section C. Oxygen

C.1. Crew Member Oxygen Requirements

C.1.a. Unpressurized Aircraft

Oxygen shall be used at all altitudes above 10,000 feet above mean sea level (MSL). Aircrew should be aware of the physiological degradation of high altitude flight.

NOTE

When no oxygen equipment is in use, an unpressurized aircraft may ascend to 12,000 feet MSL provided it does not remain above 10,000 feet MSL for more than thirty minutes.

NOTE

Aircraft with oxygen equipment available but unable to pressurize will not exceed flight level (FL) 180 unless a comprehensive briefing by competent aviation medical authority is obtained immediately prior to the flight. This is to reacquaint crew members with the hazards associated with high altitude flight, such as decompression sickness, hypoxia, etc., and to ensure adherence to preparatory measures, such as pre-breathing.

C.1.b. Pressurized Aircraft

If cabin pressure altitude is maintained at 10,000 feet or less, the following applies:

- Above FL 180, oxygen masks shall be readily available for use by all aircrew members
 - Above FL 250, anytime one pilot position is unoccupied or occupied by other than a qualified pilot, the remaining pilot shall be wearing and using an oxygen mask
 - Above FL 350, one pilot at the controls shall be wearing and using an oxygen mask unless there are two pilots at the controls that have an approved quick-donning mask with instant intercommunication system (ICS) capability that is properly adjusted and positioned for use within five seconds
 - Above FL 410, one pilot at the controls shall be wearing and using an oxygen mask
-

C.2. Passenger Oxygen Requirements

C.3.a. Unpressurized Aircraft

Oxygen shall be used at all altitudes above 10,000 feet MSL, subject to the exception stated in paragraph C.1.a.

C.3.b. Pressurized Aircraft

All passengers shall use oxygen when cabin pressure altitude exceeds 10,000 feet, subject to the exception stated in paragraph C.1.a. Above FL 250, oxygen must be readily available for all passengers for emergency use. Enough oxygen shall be carried to provide for all passengers until the aircraft can descend to 10,000 feet MSL.

Section D. Safety Devices

D.1. Personnel Safety Restraint

Each occupant of a Coast Guard aircraft in motion shall occupy an aircraft seat and wear a properly fastened safety belt. Where installed, both a safety belt and shoulder harness shall be worn.

D.1.a. Exceptions

Exceptions may be granted by the pilot in command for:

- Mission urgency.
- Required in-flight crew duties.
- Crew and passenger movement when above 1000 feet absolute altitude, in smooth air.
- Training and standardization checks. In this case, the PIC may authorize necessary personnel to stand on the flight deck of C-130 aircraft during takeoff and landing when required for training or standardization checks of flight engineers. In addition, C-130 Standardization Unit instructor pilots may stand on the flight deck when performing standardization checks.
- C-130: During flight, one pilot and the flight engineer shall be seated at their flight stations whenever the other pilot is not seated. In addition, both pilots shall be seated at their flight stations whenever the flight engineer is not seated.

D.1.b. Safety Harness

Crew members engaged in activity near an open or faulty hatch, door, ramp, or window shall wear a properly attached safety harness ("gunner's belt").

C-130 crew members are not required to wear safety harnesses (gunner's belts) when removing the flight deck overhead escape hatch.

D.1.c. Space Available Passengers

Restraint for passengers participating in the "Space Available Travel Program" is specified in Chapter 4, paragraph C.3.a.

D.2. Personnel Hoisting and Delivery Devices

Only personnel hoisting and delivery devices (strops, baskets, litters, harnesses, fast rope, etc.) which have been approved by Commandant (CG-711) for use on Coast Guard helicopters are authorized. Personnel hoisting and delivery devices maintained at air stations shall be enrolled in the Aviation Computerized Maintenance System (ACMS).

Approved litters aboard cutters or at small boat stations shall be marked as "Helicopter Hoistable" and maintained in accordance with the Rescue and Survival Systems Manual, COMDTINST M10470.10 (series).

D.3. Ballistic Vests

Ballistic protection is to be worn by aircrew on all training and operational AUF missions.

D.4. Chemical, Biological, Radiological, Nuclear (CBRN) Ensemble

Ensemble is to be worn by aircrew when conducting CBRN missions.

Section E. Minimum Rescue/Survival Equipment

E.1. Overview

Table 7-2 denotes the minimum rescue/survival equipment required on board Coast Guard Aircraft. Commanding Officers are authorized to deviate from this list to meet mission requirements (e.g., AUF, ATON, ferry).

Table 7-2

Minimum Rescue/Survival Equipment Required On Board Coast Guard Aircraft					
ITEM		LRS	MRS	MRR	SRR
1.	Pyrotechnics				
	MK-25 Marine Location Marker	8	4	3	3
	MK-58 Marine Location Marker	6	1	1	0
2.	Rescue and Survival Equipment				
	Aircraft Emergency Locator Transmitter	1	1	1	1
	Air Delivery Survival Kit (ADSK)	1	0	0	0
	Air Delivery System Can (for portable radio/small items ADS)	1	1	0	0
	ADR-6 Air Drop Raft (one 6-place raft dropped by parachute)	0*	1	0	0
	ADR-20 Air Drop Raft (one 20-place raft dropped by parachute)	0*	0*	0	0
	ASRK-18 Air Sea Rescue Kit (three 6-place rafts and two accessory containers dropped inflated or uninflated)	1	0	0	0
	Blankets	0	0	2	2
	Cable Cutter	0	0	1	1
	Crash Ax	2	1	0	1
	Self Locating Data Marker Buoy (SLDMB)	1	1	0*	0*
	Datum Marker Buoy (DMB)	0*	0*	1	1
	Dewatering Pump	2	1	1	0*
	Quick Strop	0	0	1	1
	Hoist Static Discharge Cable	0	0	1	1
	Emergency Recovery Device (ERD)	0	0	1	0*
	First Aid Kit	10	1	2	2
	Flashlight	4	2	2	2
	Knee Pads	0	0	1	1
	Personal Flotation Device (PFD) (passenger)	8	3	4	2

Continued on next page

Minimum Rescue/Survival Equipment Required On Board Coast Guard Aircraft					
ITEM		LRS	MRS	MRR	SRR
	Litter	0	0	1	0*
	Message Container	10	5	5	3
	Quick Splice	0	0	1	1
	Raft, LRU-15 (20 person, wing stowage)	2	0	0	0
	Trail Line Quick Disconnect	0	0	1	1
	Raft, LRU-20/A (6 person)	0	1	1	1
	Rescue Basket	0	0	1	1
	Rescue Sling	0	0	1	1
	Safety Harness (gunners belt)	3	2	2	2
	Salt Packets	15	15	15	15
	Strobe Light w/ Float	3	2	2	2
	Survival Vest (aircrew)	12	5	0	0
	Trail Line — 105 ft	0	0	2	1
	Work Gloves	1	1	1	1
* Item is optional.					
NOTES					
1. Units may elect to carry the thermal recovery capsule (TRC) in helicopters in colder climates.					
2. All aircraft shall carry one PFD for each person on board; for passengers, only inflatable military aircraft type PFDs are authorized.					
3. All aircraft shall carry life rafts for flights that remain over water longer than 30 minutes or extend beyond 100 nautical miles from the nearest shore.					
4. Helicopter survival vests must be worn, not carried.					

This Page Intentionally Left Blank

Chapter 8

FLIGHT CREW MEMBER DESIGNATIONS, QUALIFICATIONS AND TRAINING

Introduction

All flight crew members require thorough training to function as efficient members of a safe and effective flight team. To ensure crew members develop and maintain a high standard of proficiency, commanding officers of aviation units shall ensure completion of training as described in this chapter. Commanding Officers shall require training beyond these minimums if necessary to maintain proficiency.

In this chapter

This chapter is divided into 14 sections:

- Administrative Requirements for Aviation Units
 - Designations
 - Requirements for Designations
 - Minimum Recurrent Training Requirements for Coast Guard Flight Crew Members Assigned to Operational Flight Duty
 - Minimum Recurrent Training Requirements for Coast Guard Pilots Assigned to Duty Involving Flying Proficiency (DIFPRO)
 - Compliance with Recurrent Training Requirements
 - Annual Proficiency Checks
 - Miscellaneous Proficiency Requirements
 - Other Periodic Training
 - Special Qualification Requirements
 - Pilot Instrument Qualification
 - Rescue Swimmer Operations Training
 - Lapse and Re-designation
 - Approved Simulators
-

Section A. Administrative Requirements for Aviation Units

A.1. Unit Training Program

Unit training programs shall be established to prepare flight crew members for designation and to maintain desired skills through recurrent training.

A.2. Pilot Examinations

Examinations shall be prepared and administered to satisfy the examination requirements prescribed for designations and instrument ratings. Comprehensive open and closed book tests are required. The use of exams developed by standardization units is recommended.

A.3. Enlisted Flight Crew Member Examinations

Coast Guard Institute exams shall be administered in conjunction with Institute courses. Recommend changes to Coast Guard Institute courses as necessary to the appropriate standardization unit. If Coast Guard Institute course exams are not available, examinations shall be prepared and administered to satisfy requirements. The use of examinations developed by standardization units is recommended.

A.4. Flight Standards Board

A Flight Standards Board (FSB) composed of experienced Aircraft Commanders (ACs), Instructor Pilots (IPs), Flight Examiners (FE), the Flight Safety Officer (FSO) and enlisted flight crew members shall be established. The Board's function will be to advise the commanding officer on matters pertaining to unit standardization, aircraft, and crew performance and other related topics.

A.5. Flight Examining Board

A Flight Examining Board (FEB) composed entirely of designated flight examiners representing pilots and each enlisted aircrew position shall be established. Designation and flight checks shall be given by members of the FEB. Instructor designation does not constitute automatic membership on the FEB. Members of the FEB may serve concurrently on the Flight Standards Board. Members of the Flight Examining Board may serve concurrently on the Flight Standards Board.

A.6. Refresher Training/Rechecks

Provide refresher training and rechecks to individuals who fail standardization checks.

A.7. Taking Action

Take appropriate action when individuals do not maintain a current designation, fail to meet recurrent training minimums, or fail an annual SAR procedures or standardization check.

The Commanding Officer shall notify Commandant (CG-711) in writing when a pilot under his or her command loses his or her designation for reasons other than medical.

A.8. Training Information Data Entry

Ensure the required training information is entered into the ALMIS database.

A.9. Records/Log-books

Maintain all aircrew members' training records and logbooks.

Continued on next page

A.9.a. Training Records

The appropriate Aviation Maintenance Management Information System (AMMIS) report reflecting the completion of the most recent training requirement is adequate evidence of completion. This report must be filed in the individual's training jacket.

The United States Coast Guard Training Record (CG Form 5285) is the standard training jacket. The standard cover sheets for each section can be found at the following web address: <http://cgweb.comdt.uscg.mil/G-OCA/G-OCA.htm>. The cover sheets are listed as follows: Cover Page, Record of Aircraft Designation, Record of Formal Training Pages 1 & 2, Record of Special Qualifications/Designations, Record of Transfer History. These cover sheets are the standard recording pages for training and should be inserted into the appropriate sections of the training jacket.

Upon PCS, this training record will be sealed and hand carried by the member to the gaining command. It will be maintained throughout an individual's career as a Coast Guard flight crew member.

All completed syllabi and standardization check sheets will be retained for a minimum of four years following completion. Each individual's record must be updated annually, preferably just before the unit's Standardization Visit. The ALMIS report is adequate evidence of completion of training requirements.

A.9.b. Logbooks

For pilots, each issuance, change, or revocation of a designation, and the periodic renewal of instrument qualifications, standardization checks, SAR procedures checks, Shipboard-Helicopter, and NVG operations shall be recorded on the Qualifications and Achievements pages of the logbook and signed by the commanding officer of the issuing command. See Chapter 9, section F, and [Appendix H](#) for additional logbook guidance.

A.10. Maintaining Designations/Competency Records

A.10.a. Coast Guard Competency Listings

Maintain records of enlisted flight crew member designations and competencies in accordance with the following:

Assign and insert an appropriate Coast Guard competency listing in the individual's Direct Assess record. Unit Servicing Personnel Office (SPO) or Administration Office will make the appropriate Direct Access entry when the Commanding Officer has signed the Aircrew Designation Letter.

A.10.b. Signed Entry

Insert designation letter signed by the Commanding Officer into section 1 of the individual's aircrew training record.

Continued on next page

**A.11. Awarding
Aircrew Insignia**

Award flight crew member and non-crew member's insignia in accordance with the Personnel Manual, COMDTINST M1000.6 (series), and Aircrew Certificate (CG-4685) in recognition of designation. The Aircrew Insignia is a breast insignia prescribed by Coast Guard Uniform Regulations.

Authority to temporarily wear the mission specialist breast insignia will last as long as the individual is assigned to a unit with responsibilities to perform one of the mission specialist duties and maintains the appropriate qualification criteria. Individuals must accumulate at least 200 flight hours in rotary wing aircraft or 400 flight hours in fixed wing aircraft while training for or performing their mission specialty before this insignia can be worn permanently. Personnel qualified or previously qualified as pilots, Naval flight officers, flight surgeons, aircrew or rescue swimmers are not authorized to wear the mission specialist breast insignia. This insignia can be rescinded at any time if the commanding officer determines that the individual is no longer professionally qualified and revokes this designation and/or the individual requests to be permanently removed from the designation.

**A.12. Rescinding
Aircrew Insignia**

Rescind the right to wear flight crew member or non-crew member insignia when any of the following occurs:

- The commanding officer determines that the individual is no longer professionally qualified and revokes the designation
 - The individual requests to be permanently removed from flight duty
-

Section B. Designations

B.1. Overview

Each person flying as a crew member on Coast Guard aircraft will hold a current designation in the type of aircraft or be in training for such designation. Commanding officers shall ensure expeditious completion of syllabi. Personnel shall not be allowed to remain in a training syllabus without satisfactory progress for extended periods. Trainee status shall not be used to allow undesignated individuals to remain on flight orders. There is no requirement that current designations be maintained in all assigned aircraft. In the interest of flight safety, multiple designations should be kept to a minimum consistent with the needs of the unit. Crew member designations issued before a change in designation requirements remain in effect, even if the individuals have not met the new requirements. Flight Mechanics must be Rescue Swimmer qualified to maintain their designation.

B.2. Authority

Designations may be issued or revoked by commanding officers of aviation units.

All aviation ratings (Aviation Maintenance Technician (AMT), Avionics Electronics Technician (AET), and Aviation Survival Technician (AST)) and E-3 and below personnel who are assigned an aviation designator (e.g., ANAMT) are eligible for enlisted flight crew member designations. Non-aviation ratings (e.g., GM, HS, MST) are eligible for the Aviation Mission Specialist designation if their duties require participation in aerial flight. Flight Surgeons are designated and assigned by Commandant (CG-1121).

Continued on next page

B.3. Types of Designation

B.3.a. Pilot

Pilot (P) designations are Pilot Under Instruction (PUI), Copilot (CP), First Pilot (FP), Aircraft Commander (AC), Unmanned Aerial Vehicle Pilot (UP), Instructor Pilot (IP), and Flight Examiner (FE). The IP and FE designations are adjunctive qualifications to the AC designation for the purpose of more safely accomplishing unit training.

B.3.b. Other Crew Member Designations

Other crew member designations are: Basic Aircrew (BA), Avionicsman (AVI), Dropmaster (DM), Loadmaster (LM), Flight Mechanic (FM), Navigator (N), Sensor Systems Operator (SSO), Tactical System Operator (TSO), Radio Operator (R), Rescue Swimmer (RS), Flight Engineer (FE), Flight Surgeon (FS), Aviation Gunner (AG), Aviation Mission Specialist (AMS), and day-only Hoist-Qualified Basic Aircrew (HQBA).

B.3.c. Authorized Designations

Table 8-1 lists flight crew member designations authorized for each aircraft.

Table 8-1

	H-65	H-60	MH-68	HC-130	HU-25	C-37/ C-143	C-130J
FM	•	•				•	•
RS	•	•					
BA	•	•	•	•	•		•
AG	•	•	•				
HQBA	•	•					
AVI					•	•	
DM				•	•		•
SSO				•	•		
LM				•			•
R				•			
N				•			
TSO				•			
FE				•		•	•
FS	•	•	•	•	•	•	•
AMS	•	•	•	•	•	•	•

Section C. Requirements for Designations

C.1. Overview

Minimum requirements for designations are prescribed in this paragraph. Commanding officers may supplement these requirements and may increase flight time minimums prescribed for designations. Flight crew members designated in one type of aircraft may be exempt from meeting those requirements for another type of aircraft that are identical in both, if current proficiency and knowledge are considered satisfactory by the commanding officer.

C.2. Flight Syllabi

Commandant (CG-711) approved flight syllabi shall be used for all flight crew member designations and qualifications, including those for Unmanned Aircraft Systems (UAS) and lighter than air vehicles. Completed syllabi shall be retained in the individual's training record for no less than four years. If a pre-arrival syllabus is available and adequate time is available, it should be completed by all transition or re-qualification students prior to reporting to ATC Mobile. The H-65 Copilot-in-Waiting Syllabus is mandatory for all transition students and should be completed by re-qualification students.

C.3. General Requirements for All Designations

Per paragraph I.4. of this chapter, the following general requirements must be completed before commencing the flight portion of any designation syllabus, except those items in which a trainee is current.

- Emergency Ground Egress Training
- Training in Installed Survival Gear
- Training in Use of Intercom System and Terminology
- Water Survival Training and Swim Test
- Low Pressure Chamber Training (Pressurized Aircraft)
- Underwater Egress Training (Helicopters)

C.3.a. Other Training

The following shall be completed before designation, except those items in which a trainee is current, need not be repeated.

- Training in Search and Scanning
- Training in Operating the Flare Launch Panel (C-130)
- Egress Breathing Device/Shallow Water Egress Training (R/W only)

C.3.a.(1) Within 60 Days after Designation/Transition

The following training shall be completed within a 60-day period after designation at ATC Mobile, or within a 60-day period after arrival at an operational unit for C-130 personnel having just completed transition.

- Local Initial OPSEC/COMSEC Training
- Training in the Use of SAR Equipment and Pyrotechnics

Continued on next page

C.3.a.(2) Unit Familiarization Training

Each member reporting to a unit shall receive, as a minimum, training on unit unique equipment, operating area survival demands and equipment, area familiarization, hospital sites within operating area, and local policy and procedures prior to any operational flying.

C.3.a.(3) Land Survival Training

Each trainee shall attend a land survival briefing, or view a locally produced audiovisual presentation tailored to the problems unique to the unit's operating environment.

C.4. Requirements for CP Designation

To be designated a CP, an aviator must meet the following requirements:

Hold a current designation as a military aviator.

Complete an appropriate flight syllabus, including a check flight. The U.S. Air Force C-130 Pilot Initial/Re-qualification Course or a suitable alternative qualification course approved by Commandant (CG-711) is required before initial C-130 designation/re-qualification. The ATC Mobile HU-25, H-60 or H-65 transition/re-qualification course is required before initial designation/re-qualification in those aircraft.

Hold a valid Coast Guard or other military instrument rating in the category of aircraft.

Be proficient in navigation and the use of all installed navigation equipment.

Complete a written closed book examination on critical aircraft systems, emergency procedures, and limitations.

Complete a written open book examination on:

- Aircraft systems and emergency procedures
- Communication and security procedures
- Federal Aviation Regulations
- Local flight rules
- Installed SAR equipment
- Air Operations Manual, COMDTINST 3710.1 (series)

Prior to designation as a mission qualified CP for specific Aviation Special Missions (ASM), pilots must meet additional requirements listed in section J of this chapter.

C.5. Requirements for FP Designation

To be designated a FP, an aviator must meet the following requirements:

Be recommended for the FP designation by the unit Operations Officer or the cognizant ATC Mobile Training Branch.

Fulfill, to a more advanced degree, all requirements for CP designation.

Have not less than 500 hours of total pilot time in military aircraft.

Continued on next page.

Continued on next page

C.5.a. Requirements
for FP Designation
(continued)

Complete an appropriate flight syllabus including a check flight.

Complete a written closed book examination on critical aircraft systems, emergency procedures, and limitations.

Complete a written open book examination on:

- Aircraft systems and emergency procedures
- All applicable SAR and law enforcement directives and publications, pertinent Coast Guard manuals, and Commandant Instructions
- Weight and balance
- Fuel management
- Ground security of aircraft away from home unit

AUF FP Designation (in addition to FP requirements):

- Prior to designation as a mission qualified FP for specific Aviation Special Missions (ASM), pilots must meet additional requirements listed in section J of this chapter
-

**C.6. Requirements
for AC Designation**

To be designated an AC, an aviator must meet the following requirements:

Be recommended for the AC designation by the unit Operations Officer.

Fulfill to a more advanced degree all requirements for FP.

Complete Incident Command System (ICS-200) training in accordance with the Coast Guard Incident Command Implementation Plan, COMDTINST M3120.15 (series).

For multi-piloted fixed wing (F/W) aircraft, have not less than 900 total pilot hours in military aircraft (excluding 3rd pilot time), of which at least 250 hours is in F/W aircraft.

- For all multi-engine aircraft, have at least 250 hours in F/W multi-engine aircraft

For rotary wing (R/W) aircraft, have not less than 700 total pilot hours in military aircraft (excluding 3rd pilot time), of which at least 150 hours is in R/W aircraft.

Complete a formal National Search and Rescue residence or correspondence course. The Search and Rescue Fundamentals Correspondence Course (Short Title: SARFND) was designed to fulfill this requirement.

Complete an appropriate flight syllabus including a check flight.

Complete a closed book examination on critical aircraft systems, emergency procedures, and limitations.

Continued on next page.

Continued on next page

C.6.a. Requirements
for AC Designation
(continued)

Complete an open book exam on:

- Air Operations Manual, COMDTINST 3710.1 (series)
- U.S. Coast Guard addendum to the United States National Search and Rescue Supplement (NSS) to the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR), COMDTINST M16130.2 (series)
- Current directives, including unit, district, and Commandant Instructions
- Pertinent technical data and publications concerning aircraft operations
- Application of operations and communications plans

Complete an oral exam that focuses on the practical application of the material examined via the open- and closed book exams. Special emphasis will be placed on evaluating the candidate's judgment and maturity during this exam.

Demonstrate, to a high degree, ability to:

- Exercise flight discipline and aircrew supervision, including the use of Crew Resource Management principles
- Carry out all types of SAR missions including duty as on-scene commander, as appropriate for type
- Carry out all other types of missions normally performed by the unit (i.e., Drug or Fisheries LE, SAR, MEP, ATON, etc.)

AUF AC Designation (in addition to the AC requirements):

- Prior to designation as a mission qualified AC for specific Aviation Special Missions (ASM), pilots must meet additional requirements listed in section J of this chapter

**C.7. Requirements
for AUF and
CD Air Mission
Commander (AMC)
Designation**

Fulfill to a more advanced degree all requirements for AC.

Have not less than 1000 hours of total pilot time in military aircraft with not less than 500 hours R/W and no less than 50 hours specific to AUF Aircraft.

Complete Commandant (CG-711) approved ground/flight syllabus specific to AUF Operations.

Complete a minimum of one AUF deployment before designation.

Continued on next page.

Continued on next page

C.7.a. Requirements
for AMC Designation
(continued)

Complete a written open book examination on:

- AUF Policy
- AUF Operation

CD AMC written open book exam shall also contain the following:

- Evidence gathering procedures

**C.8. Requirements
for Other Flight
Crew Member
Designations**

AMTs, AETs and ASTs will maintain the aircrew designation level required by the Commanding Officer of their assigned unit. In order to maintain designation proficiency a crew member may only maintain maximum of three primary aircrew designations. For other aviation rating limitations review: Coast Guard Aviation Medicine Manual, COMDTINST M6410.3 (series), Chapter 1, section B, paragraph 4. and 17.A.5 of Coast Guard Personnel Manual, COMDTINST M1000.6 (series).

C.8.a. Basic Aircrew

The Basic Aircrew designation is an initial, entry-level aircrew position. To be designated a Basic Aircrew, the person must have fulfilled the following requirements:

- Must be a graduate of a military aviation "A" school; or from a Coast Guard approved commercial aviation "A" school, or have achieved an aviation rating in another U. S. Armed Forces, or have been an aviation air crewman qualified in another Coast Guard aircraft.
- Must have completed the aircraft type specific Basic Aircrew Coast Guard syllabus, or a syllabus prescribed by the unit commanding officer (if one is not published by the ATC).

C.8.a.(1) Primary
Aircrew Designation

The Primary Aircrew designation is the next achieved position in type above the member's initial, entry level aircrew designation (e.g., DM, LM, SSO). All crew members will successfully achieve an aircrew designation at the primary level to maintain their operational eligibility for worldwide assignment. See table in paragraph H.3.a. of this chapter for relationship between primary, secondary and basic designation.

C.8.b. Crew Positions

To be designated Avionicsman, Dropmaster, Loadmaster, Flight Mechanic, Navigator, Sensor Systems Operator, Tactical Sensor Operator or Flight Engineer, an individual must have completed all requirements for Basic Aircrew or Aviation Mission Specialist in type.

HU-25 Dropmaster, Avionicsman must either:

- Complete the appropriate Coast Guard Institute Course/Syllabus
- Complete ATC Mobile's Avionicsman/Dropmaster course

HU-25B Sensor Systems Operator must be a designated HU-25 Avionicsman and complete the HU-25B Sensor Systems Operator syllabus.

Continued on next page.

Continued on next page

**C.8.b.(1) Crew Positions
(continued)**

HU-25C Sensor Systems Operator must be a designated HU-25 Avionicsman and complete the HU-25C Sensor Systems Operator syllabus.

C130 Flight Engineer, Radio Operator, Navigator, Loadmaster, Dropmaster, Tactical Sensor Operator, and Sensor System Operator must complete the appropriate Coast Guard syllabus.

In addition, for Flight Engineer:

- Must complete the USAF C-130 Flight Engineer Course or an approved Commandant (CG-711) C-130 Flight Engineer Course
- Must have been a qualified C-130 aircrew member for at least one year and recommended for upgrade to Flight Engineer by unit FEB

In addition, for Navigator:

- Must be a qualified Radio Operator with at least 50 flight hours in aircraft type
- Must complete the C-130H Navigator Syllabus Part I (Refer to C-130 Training and Standardization Manual, CGTO 1C-130-1-A)
- Complete the ATTC Basic Air Navigation course and any other locally required syllabus items

Helicopter Flight Mechanic. Complete the appropriate Coast Guard Institute Correspondence Course and Syllabus.

Hoist Qualified Basic Aircrew (HQBA). Complete appropriate sections, as identified by ATC Mobile, of the Coast Guard Institute Correspondence Course and syllabus. The HQBA position is optional. The intent of this position is to reduce training hours and assist with SAR cases and hoist training flights that do not require a rescue swimmer. This position is not rescue swimmer qualified and is restricted to day only hoisting evolutions.

C.8.c. Rescue Swimmer

To be designated a Rescue Swimmer, an individual must have completed the syllabus for BA in the H-60 and the H-65. In addition, an individual must:

- Complete a military helicopter rescue swimmer school
- Complete the Coast Guard Syllabus for Rescue Swimmer for type of aircraft
- Complete certification as a Coast Guard EMT

NOTE

Rescue Swimmers previously designated in one helicopter type may be assigned duty standing status in a new type while completing the requirements, not to exceed 60 days. Qualified Rescue Swimmers may log deployments regardless of the helicopter from which they are deployed.

Continued on next page

C.8.d. Aviation Gunner
(AG) Designation

An AG is a Coast Guard active duty member who holds a basic aircrew, primary aircrew, or aviation mission specialist designation in type aircraft, and who has been trained and qualified to conduct Airborne Use of Force missions. AGs are categorized in one of three classes as listed in the table below.

Each crew member flying in the AG position on board Coast Guard aircraft will hold a current qualification as an AG. All Aviation Gunners require thorough training to function as efficient members of a safe and effective weapons platform.

In addition, non-aviation ratings must also successfully complete the Aviation Mission Specialist requirements in C.8.e.

Prerequisites	Complete all small arms prerequisites including Combat Rifle Level 2, Personal Defense Weapon (PDW) Level 2, PQS, familiarization, ground fire courses, USCG Use of Force policy training, approved ground syllabus, Judgmental Pistol Course (JPC), and an appropriate Combat Rifle Course (CRC).
Ports, Waterways and Coastal Security (PWCS) AG (Organic aviation units)	Complete Commandant (CG-711) approved flight and ground course including: area fire weapons system, precision fire weapon system, mission specific tactics, Designated Marksman (DM) syllabus, and other applicable doctrine, procedures and firing techniques.
Counterterrorism (CT) AG (Maritime Safety and Response Team (MSRT))	<p>Complete Commandant (CG-711) approved flight and ground course including: area fire weapons system, precision fire weapon system, mission specific tactics, DM syllabus, and other applicable doctrine, procedures and firing techniques.</p> <p>Members shall also attend a Commandant (CG-711) approved or endorsed advanced Coast Guard, DOJ, or DOD course in ballistics, angles of fire, engaging targets at distances up to 300 meters, unassisted night fire, moving target engagement, range estimation, and shooting within a stressful environment where friendly forces are in the vicinity of the target.</p>
<p>Counter Drug (CD) AG (Helicopter Interdiction Squadron (HITRON))</p> <p>(Tactical Law Enforcement Teams (TACLETs))</p>	<p>Complete Commandant (CG-711) approved flight and ground course including area fire weapon system, precision fire weapon system, DM and heavy class weapon (i.e., .50 caliber) syllabus for soft target and anti-material engagement, mission specific tactics, procedures and applicable doctrine, procedures and firing techniques.</p> <p>Members shall also attend a Commandant (CG-711) approved or endorsed advanced Coast Guard, DOJ, or DOD, course in ballistics, angles of fire, engaging targets at distances up to 300 meters, unassisted night fire, moving target engagement, range estimation.</p>

Continued on next page

C.8.d.(1) Requirements
for AG Designation

To ensure AGs develop and maintain a high standard of proficiency, Commanding Officers of Airborne Use of Force units shall ensure completion of training and requirements as described in this manual and the Coast Guard Ordnance Manual, COMDTINST M8000.2 (series). AG qualification is issued or revoked by commanding officers of aviation units. Prospective AGs must meet the following minimum qualification requirements:

- Receive an endorsement from his or her unit Commanding Officer. The qualifying AG Instructor (AGI) shall advise Commanding Officers of any observed AG behavior which indicates low levels of judgment and maturity. Commanding Officers shall not issue firearms or ammunition to members whom they know, or have reasonable cause to believe have been convicted of a misdemeanor crime of domestic violence (see ALDIST 028/ 97, Federal Firearms Statute).
- Complete a Commandant (CG-711) approved AG ground and flight syllabus, including a ground and flight check.
- Aviation-rated AG candidates must hold a Primary Qualification in type aircraft (FM or RS).
- Non-aviation rated AG candidates must qualify as an Aviation Mission Specialist in type aircraft prior to AG designation.
- Desired Personality Traits:
Superior judgment, maturity, and professionalism.
Superior conduct and the ability to work with others under adverse and stressful conditions without losing composure.

C.8.d.(2) AG Training

AG training is authorized only at ATC Mobile or units authorized by Commandant (CG-711) to conduct AUF training and/or operations. AGs may receive initial training from ATC Mobile or at their AUF-authorized home units, utilizing Commandant (CG-711) approved syllabi. AGs shall be designated in writing by aviation unit commanding officers.

Continued on next page

C.8.e. Requirements for AMS Designation

Qualifications for aviation mission specialists will vary by specialty and aerial platform. However, all aviation mission specialists will be required to complete an AMS syllabus and a second syllabus pertaining to their specialty. To be designated an Aviation Mission Specialist (AMS), an individual shall successfully complete the following items:

- * Successfully pass and maintain an Aviation Class II Flight Physical
- * Annual swim test/wet drill
- * Low-Pressure Chamber training for pressurized aircraft
- * Underwater Egress Training qualification for rotary wing platforms (valid for 72 months)
- * Be eligible for and maintain the appropriate security clearance
- Annual emergency ground egress
- Initial Crew Resource Management (CRM) training and follow-on annual Refresher CRM training (annual requirement - within 15 months of previous Refresher CRM training date). Team Coordination Training, Initial or Refresher, is not an authorized substitute.
- Annual SAR equipment and pyrotechnics training
- Annual egress breathing device/shallow water egress training for rotary wing platforms
- First aid and CPR training
- Annual OPSEC/COMSEC training
- Annual OPHAZARD Awareness training
- Annual land survival training

Individuals selected for the AMS program must undergo a pre-screening process upon receipt of Permanent Change of Station (PCS) orders and prior to departing their current unit. Unless operationally prohibited, the individual shall complete the first 5 asterisked items above as part of the pre-screening process. The member can utilize the closest Coast Guard air station for the swim test and flight physical. TQC will arrange the underwater egress and low-pressure training. The security clearance check can be completed by the member's current unit. Failure to complete any one of the 5 asterisked items will disqualify the individual for AMS flight duty. If unable to successfully pass the pre-screening process, the individuals respective Assignment Officer will cancel the PCS orders and the member will reenter the assignment process. The member can call the air station Leading Chief Petty Officer (LCPO) with questions or for assistance.

C.8.f. Flight Surgeon

The requirements for designation as a Coast Guard Flight Surgeon are described in [Chapter 7](#), Coast Guard Aviation Medicine Manual, COMDTINST M6410.3.

Continued on next page

C.9. Instructor Designation Requirements

There are two levels of advanced pilot designation. The first level designation is Instructor Pilot (IP). The role of the IP is to provide initial and upgrade flight syllabus instruction. The second level is the Flight Examiner (FE). The role of the FE is to conduct check rides as well as the duties of an IP.

C.9.a. Upgrade Flight Syllabus Instruction

Only designated instructors, qualified in the type of aircraft, position, and training being conducted, shall provide initial and upgrade flight syllabus instruction.

These statements only pertain to the HH65, HH60 and HU25:

- You must be supervised by a qualified aircrew instructor for sign off at the standard (S) level for the preflight, thru-flight, and postflight aircrew ground syllabus items
 - All other aircrew ground syllabus instruction may be given and signed off to the standard (S) level by a crew member qualified in the type of aircraft, position and training being conducted
-

C.9.b. Designated Instructor

Commanding officers shall designate in writing each instructor assigned to a unit. Prospective instructors must meet the following minimum qualification requirements:

C.9.b.(1) Judgment

The instructor must possess superior judgment.

C.9.b.(2) Personal Qualities

The instructor must have patience, tact, understanding, and a desire to instruct others. The instructor must have a personality that inspires confidence and wins the respect of each student.

C.9.b.(3) Technical Knowledge

The instructor must be thoroughly familiar with the aircraft systems and equipment, normal and emergency operating procedures, and aircraft performance under all conditions of flight for the respective crew member position.

C.9.b.(4) Proficiency and Experience

The instructor shall have sufficient experience to ensure the desired standard of knowledge, judgment, and proficiency in the maneuvers he or she will be instructing. The instructor must have been qualified and current in type for at least six months.

C.9.b.(5) Methods of Instruction

Instructor pilots must have received formal military or civilian training in methods of instruction. It is desirable that aircrew instructors receive formal or locally prepared training in methods of instruction.

C.9.b.(6) Instructor Syllabus

Before designation, each instructor shall complete a Commandant (CG-711) approved flight and ground syllabus.

Continued on next page

C.9.b.(7) Designation Checks

A ground and/or flight check is required before any designation. Designation checks shall be conducted by a member of the Flight Examining Board or, at the discretion of the commanding officer, by an instructor assigned to a Standardization Unit.

C.9.c. Instructor Currency Requirements

To maintain a current instructor pilot qualification, each IP shall conduct a combination of at least six upgrade syllabus flights and recurrent training syllabus flights during a semiannual period. Flight Examiners have the same requirements as instructor pilots but may utilize flight check rides toward that total.

Aircrew Instructors shall conduct at least three syllabus instruction flights, ground training sessions on the aircraft, or check flights in the crew position and type of aircraft designated during any semiannual period. C-130 Loadmaster Instructors may complete their semiannual syllabus or flight checks in the aircraft without actually being in flight.

Instructors who fail to conduct the minimum number of instructional or check flights lapse and must satisfactorily complete an instructor check before conducting further instructional flights.

C.9.d. Aviation Gunner Instructor (AGI)

AGIs are designated in writing by aviation unit commanding officers and are responsible for the oversight of the unit AG recurrent training program. This includes:

- Conduct AUF AG qualification flights.
- Conduct ground range training and qualification scoring when shooting an AUF course of fire.
- Evaluate the suitability of individuals to remain in the AG program.
- Make all necessary entries in AG training records regarding performance in an AUF course of fire or instruction to include Small Arms Firing Reports, form CG-3029.

Aviation Gunner Instructors must meet the requirements of the Ordnance Manual, COMDTINST M8000.2 (series). A unit AGI, designated in writing by the member's commander officer, is allowed to perform AG instruction flights only at his or her current unit and classification level. AGIs shall conduct at least three syllabus instruction flights, which may include ground range sessions or check flights in the designated classification level, during any semiannual period.

AGIs who fail to meet the minimum number of instructional flights lapse and must satisfactorily complete an AGI check ride before conducting further instructional flights. In addition to the recurrent training minimums, unit AGIs are encouraged to conduct periodic training. This training should focus on improving and maintaining proficiency of unit aviation gunners and instructors. Recommended training topics to be covered, but not limited to, weapons familiarization, and ground and aerial live fire range training.

The Enlisted Flight Examining Board for each Airborne Use of Force unit with AGs assigned shall have at least one AGI assigned as a member of the board.

Continued on next page

C.10. Civilian Contract Pilots

ATC Mobile AGIs are designated in writing by the commanding officer of ATC Mobile. AGIs may conduct AG training, qualification and standardization checks of AGs and AGIs at AUF-qualified aviation units.

Civilian Contract Pilots (CCP) are former USCG pilots hired as limited duty aircraft commanders by ARSC to assist with maintenance, post-PDM test flights and ferry flights. They are authorized to fly on proficiency, training and maintenance check flights to maintain currency. CCPs are exempt from all SAR procedures and qualifications and shall not retain NVG qualification. Minimum professional qualifications required prior to consideration for employment are:

- FAA Rating: Commercial Pilot, Rotorcraft-Helicopter, Instrument Helicopter for rotary wing pilots and Commercial Pilot, Multi-Engine Instrument for fixed wing pilots
- Current FAA Class II Medical Certificate
- Former Coast Guard aviator with a minimum of 1000 hours as Pilot in Command in USCG type (e.g., F/W or R/W)

C.10.a. Training Requirements for Designation

There are three distinct categories of CCP candidates based on time elapsed from their Released From Active Duty (RELAD) date:

- A CCP candidate who has held aircraft commander qualification in the designated airframe type within the last six months prior to RELAD and is still current and qualified IAW the requirements outlined in [Chapter 8](#), is required to complete a 30-day warm-up prior to designation by the Commanding Officer, ARSC. The 30-day warm-up may be completed by any ARSC or air station aircraft commander.
- A candidate who has held aircraft commander qualification in the designated airframe type within the last 12 months prior to RELAD, but has lapsed in the annual, semiannual, and recurrent training requirements outlined in [Chapter 8](#), is required to complete a standardization flight check and instrument check prior to designation by Commanding Officer, ARSC. The Standardization and Instrument Checks may be completed by any ARSC or air station instructor pilot.
- A candidate who has not held an aircraft commander qualification in the designated airframe type in over 12 months but less than four years prior to RELAD is required to complete a Re-qualification Course (modified) at the appropriate ATC Mobile Standardization Branch prior to designation. The modified course will include all standard re-qualification training syllabi with the exception of SAR procedures, NVG and Aviation Special Mission qualifications.
- A candidate who has not held an aircraft commander qualification in the designated airframe type within four years (48 months) of RELAD is not eligible for designation as a civilian contract pilot.

The Commanding Officer of ARSC shall forward a request for approval to Commandant (CG-711) prior to designating a candidate as a CCP.

Continued on next page

C.10.b. Minimum
Semiannual Recurrent
Training Requirements

- Flight Time (hours) – 36
- Night Time – five
- Instrument approaches:
Precision – five (two of which must be at night)
Non-Precision – five (two of which must be at night)
- Autorotations (R/W) - five (not required for Ariel 2C2 engined H-65)
- Airways Training Flight – one (may be accomplished in approved flight simulator)
- Landings – five (at least one night full stop)

C.10.c. Minimum
Annual Recurrent
Training Requirements

- Modified proficiency course (may be extended to 15 months if required)
- Instrument check and written test (may be extended to 15 months if required)
- Modified annual standardization check (may be extended to 15 months if required)
- All items listed in table 8-2, paragraph 1, paragraph 2, and paragraph 3a through paragraph 3k

C.10.d. 72-Month
Training Requirement

Underwater Egress Trainer (helicopter only)

C.10.e. Lapse and
Re-designation

Failure to meet requirements in paragraphs C.9.b. and C.9.c. will result in lapse of designation. A CCP whose designation has lapsed is required to meet requirements set forth in Chapter 8, paragraph L.4. prior to re-designation.

C.10.f. Authority

The CCP may sign for the aircraft as Pilot in Command when flying with pilots designated as First Pilot (FP) or Copilot (CP). When flying with other designated aircraft commanders, the CCP will be assigned as a CP. The CCP shall not be qualified as an instructor pilot.

Section D. Minimum Recurrent Training Requirements for Coast Guard Flight Crew Members Assigned to Operational Flight Duty

D.1. Overview

The requirements listed in table 8-2 represents the minimum flight requirements for all pilots whose orders designate them DIFOPS, and for designated flight crew members, regardless of which designations are held in any type aircraft. It is recognized that proficiency is dependent upon individual flight currency, total experience, and other factors including tempo of current operations.

In general, it is desirable to provide duty standing pilots 20-25 flight hours per month to ensure adequate proficiency, limit operational risks, and not compromise flight safety. Where a multiple of a specific requirement or maneuver is specified, it is expected that the requirement will be prorated in a reasonable manner over the entire semiannual period. Waiting until late in the period to meet the semiannual requirement renders the training much less effective, demonstrates poor judgment on the part of the individual concerned, and shows inadequate supervision on the part of the command.

NOTE

Those Coast Guard pilots assigned DIFOPS on exchange programs with another service will fulfill the minimum requirements of that service.

NOTE

Flights may be made by Coast Guard flight crew members while in a leave status and can be logged to meet semiannual training requirements. The Comptroller General has held that flights made while in a leave status may not be considered as meeting minimum flight requirements for crediting of flight pay.

D.2. Minimum Recurrent Training Requirements

Minimum recurrent training requirements represent the minimum recurrent flight and ground training necessary to maintain proficiency. These requirements apply to all crew members assigned to flight status regardless of designation.

D.3. Flight Training Syllabi

Commandant (CG-711) approved or locally developed recurrent flight training syllabi shall be completed semiannually. These syllabi should contain adequate flexibility to monitor and provide for additional maneuvers as deemed necessary to maintain proficiency.

D.4. Minimum Performance Standard

The minimum performance standard for any recurrent training requirement shall be at least equal to the performance standard required for current designation.

Continued on next page

D.4.a. 12 Year Low Pressure Chamber (LPC) Training Requirements for Pilots of Pressurized Aircraft

LPC (pilots of pressurized aircraft)

D.4.b. 72 Month Training Requirements for Flight Crew Members and Mission Specialists

Underwater Egress Training (helicopter crews)

D.4.c. Calendar Year General Training Requirements for Flight Crew Members and Mission Specialists

-
- Standardization Check (annual requirement - within 15 months of previous check)
 - Swim Test (not required for CGAS Washington)
 - Wet Drill (not required for CGAS Washington)
 - Egress Breathing Device/Shallow Water Egress Training (SWET) (helicopter crews)
 - Emergency Ground Egress
 - SAR Equipment and Pyrotechnics
 - OPSEC/COMSEC Training (except ARSC)
 - Operational Hazard Awareness Training
 - Land Survival Training
 - CRM Training (annual requirement - within 15 months of previous Refresher CRM training date)
 - Physiological Training (pressurized aircraft pilots and aircrew)
 - Evidence Gathering Techniques (AUF flight crew members)
 - AUF Doctrine Review (AUF flight crew members)
 - Aviation Gunner Standardization Check (qualified AGs) (annual requirement – within 15 months of previous check)
 - Tactical Vertical Insertion Standardization Check (TVI qualified flight mechanics) (annual requirement – within 15 months of previous check)
 - One ADDS mission/exercise which consists of loading the pack on the ground (using water for training), flying the pack, and deploying the booms with or without spraying and unloading the system again (annual requirement) – 12 months day to day
-

Continued on next page

D.4.d. Annual Specific Training Requirements for Pilots (schedule to complete annually, lapse at 15 months)

- Standardization Check
- Refresher CRM Training
- SAR Procedures Standardization Check (AC and FP only) (should include satisfactory CATCH, MATCH or PATCH over water under simulated instrument or night condition)
- Flight Simulator Training (semiannual requirement for CGAS Washington)
- Instrument Check (one check per aircraft category) (can be performed in simulator)
- NVG Check (one check per aircraft category)
- AUF Standardization Check (AUF qualified pilots)
- RWAI Standardization Check (RWAI qualified pilots)
- Tactical Vertical Insertion Standardization Check (TVI qualified pilots)
- One ADDS mission/exercise which consists of loading the pack on the ground (using water for training), flying the pack, and deploying the booms with or without spraying and unloading the system again (annual requirement) – 12 months day to day

D.4.e. Semiannual General Training Requirements for Flight Crew Members

Commandant (CG-711) approved Recurrent Training Syllabus (if promulgated) or locally developed Recurrent Training Syllabus.

D.4.f. Semiannual Specific Training Requirements for Pilots

Table 8-2

	Single Qual Frequency	Dual Qual Frequency (Each Type)	Remarks
1. Total Pilot Time			
(a) AC/FP	48 hours	48 hours	Up to 12 hours can be flown in a simulator
(b) CP	24 hours	24 hours	Not less than 24 hours FP time
2. Autorotations (R/W)	5	5	Daylight only (not required for Ariel 2C2 engined H-65)
3. Airways Training Flight	1	1	1. May be conducted in either type if dual qualified 2. May be accomplished in approved flight simulator 3. Completion of an Instrument Check during semiannual period fulfills this requirement

Continued on next page

	Single Qual Frequency	Dual Qual Frequency (Each Type)	Remarks
4. Night Time	6 hours	4 hours	Simulator time can fulfill up to one half night requirements
5. Landings	5	4	At least one night full stop per each type
6.			
(a) Approaches	6 precision/ 6 non-precision	6 precision/ 6 non-precision	<p>1. One circling approach must be performed in each F/W type</p> <p>2. When practical, actual or simulated approaches shall be flown to field minimums</p> <p>3. Ship-Helo OPS w/ RADAR assisted approaches, TACAN, and ADF approaches can fulfill non-precision requirements</p> <p>4. Category II operations are not authorized</p> <p>5. At least three precision each must be accomplished in the manual (uncoupled) mode</p> <p>6. Up to one half of approach requirements may be accomplished in an approved flight simulator</p> <p>7. For precision and non-precision approach minimums, at least two of each must be accomplished at night in each type. For F/W aircraft at least two must be completed to a landing at night.</p>
(b) R/W Approaches			
(1) Coupled to Hover (over water)	6	6	<p>1. At least four must be completed at night; at least two must be unaided</p> <p>2. For H-60 and H-65 up to one-half may be completed in an approved flight simulator</p>
(2) Manual to Hover	6	6	<p>1. At least four must be completed at night; at least two must be unaided</p> <p>2. For H-60 and H-65 up to one-half may be completed in an approved flight simulator</p>
(3) Instrument Letdown (Coupled)	3	3	MH-68A (two NVG)
(4) Instrument Letdown (Manual)	3	3	MH-68A (two NVG)

Continued on next page

	Single Qual Frequency	Dual Qual Frequency (Each Type)	Remarks
7. SAR Procedures			(Not required for ARSC) It is desirable to have CP fulfill the requirements
a. Boat Hoists	6	6	1. At least three must be completed at night per type at least two of which are unaided. Train in offshore environment if possible 2. Up to two RS deployments can be used to fulfill this requirement 3. One to a boat DIW with trail line
b. R/S Deployment and Recovery Sequences	6	6	1. At least four must be completed at night per type at least two of which are unaided 2. At least one Direct Deployment by each AC/FP
c. F/W Aerial Delivery			
HU-25			
(1) ADS (actual)	2	2	
(2) ADS (night actual/simulated)	1	1	
HC-130			
(1) ADS (actual)	1	1	
(2) ASRK-24 (actual)	1	1	

Continued on next page

	Single Qual Frequency	Dual Qual Frequency (Each Type)	Remarks
(3) ADS (night actual/simulated)	1	1	
(4) ASRK-24 (night actual/simulated)	1	1	
8. Night Vision Goggles			
a. NVG Flight Time	4 hours	4 hours	At least one NVG flight shall be completed every 180 days
b. NVG Flight Time (CD AG units)	12 hours	12 hours	At least one NVG flight shall be completed every 180 days
c. NVG Aided Night Land RT Flight	1	1	The Annual NVG check may count as one NVG RT
d. NVG Aided Coupled Approaches to Hover	2	2	
e. NVG Aided Manual Approaches to Hover	2	2	
f. NVG Aided Boat Hoist	1	1	
g. NVG Aided R/S Deployment/Recovery Sequences	2	2	

Continued on next page

D.4.g. Semiannual
Training Requirements
for Sensor and Tactical
Systems Operators

D.4.g.(1) C-130H SSO

Sensor Systems (SS) — Refer to C-130H Training Manual, CGTO-1C-130-1-A.

D.4.g.(2) C-130H TSO

Tactical Systems (TS) — Refer to C-130H Training Manual,
CGTO-1C-130-1-A.

D.4.h. Semiannual
Specific Training
Requirements for Flight
Surgeons

D.4.h.(1) Total Flight
Time

24 hours — To include at least four hours of night time.

D.4.h.(2) Ship-Helo
Operations

One hour — If assigned to a unit deploying helicopters aboard ships. This one hour flight time should be aboard a helicopter engaged in shipboard practice landings.

D.4.i. Semiannual
Specific Training
Requirements for
Loadmasters

One cargo loading exercise to include conducting actual load with Form F completion.

Continued on next page

D.4.j. Semiannual
Specific Training
Requirements for
Dropmasters

	Frequency
Radio Can/Pump Drop (C-130)	1
MA-3/ASRK-24 Kit Drop (C-130)	1
Pump Drop (HU-25)	1
ADS Can/Raft Drop (HU-25)	1
All drops, whether actual or drill equipment, shall include proper rigging and placing equipment in the drop position, while in-flight. For the HU-25, one drop may be simulated. For the C-130, all drops shall be actual drops from the aircraft.	

D.4.k. Semiannual
Specific Training
Requirements for
Helicopter Flight
Mechanics

	Frequency	Remarks
Boat Hoists	4	Two at night, one to a boat DIW with trail line
Rescue Swimmer Deployments Recovery Sequences	4	Two at night; each deployment/recovery may count as a boat hoist, not to exceed two at least one Direct deployment
Hoist Emergency Drill	2	Recommend at least: one hoist failure, one ICS failure

D.4.l. Specific Training
Requirements for
Helicopter Rescue
Swimmers

Additional training requirements for Helicopter Rescue Swimmers are prescribed in the Helicopter Rescue Swimmer Operations Manual, COMDTINST M3710.4 (series).

Continued on next page

D.4.m. Specific
Semiannual Training
Minimum Requirements
for Airborne Use of
Force (AUF) Flight Crew
Members

	Frequency	Remarks
1. Pilots		
a. Judgmental Tactics Flight (Ports Waterways and Coastal Security (PWCS) AUF (Right Seat Only)	2	1. AUF Qualified Pilot at units with PWCS AG 2. A minimum of one shall employ NVGs
b. Tactics Flight (Counterterrorism (CT)) AUF		Refer to Vertical Insertion Training Requirements
c. Tactics Flight (Counter Drug (CD)) AUF	6	1. AUF Qualified Pilot at units with CD AG 2. A minimum of three shall employ NVGs
d. Gunnery Flight (All Classes)	2	A minimum of one shall employ NVGs
2. Aviation Gunners		
a. Judgmental Tactics Flight (All Classes)	2	A minimum of one shall employ NVGs
b. Shoulder-Fired Rifle Stationary Target Course (PWCS AG)	2	1. A minimum of one shall employ NVGs 2. Score must be recorded on the CG-3029 Small Arms Firing Report and entered by a current AGI
c. Precision Rifle Moving Target Course (CD AG)	2	1. A minimum of one shall employ NVGs 2. Score must be recorded on the CG-3029 Small Arms Firing Report and entered by a current AGI

Continued on next page

D.4.n. Specific Quarterly
Training Minimum
Requirements for
Aviation Gunners (AG)

	Frequency	Remarks
a. Precision Rifle Stationary Target Course (CT AG/CD AG)	2	1. A minimum of one shall employ NVGs 2. Score must be recorded on the CG-3029 Small Arms Firing Report and entered by a current AGI
b. Tactics Flight (CD AG)	2	1. A minimum of one shall employ NVGs 2 CD AG may obtain credit for Tactics Check during Tactics Flight
c. Aerial Gunnery Flight (All Classes)	2	1. A minimum of one shall employ NVGs 2. Includes Area and Shoulder-fired/Precision Weapon (as appropriate)
d. Aerial Gunnery Flight (CD AUFDAY Only)	2	1. Law Enforcement Detachments supporting U.S. Navy (USN) Counter Drug AUF (CD AUF) 2. Minimum one AG flight per aircraft type

Continued on next page

D.4.o. Specific 30
Day Training Minimum
Requirements for
Aviation Gunners

	Frequency	Remarks
Shoulder-Fired/Precision Weapon (as appropriate) Zero & Proficiency Course (All Classes)	1	1. Completion must be recorded in AGs data book 2. This course of fire will be completed at a ground range

D.4.p. Specific Weekly
Training Minimum
Requirements for
Deployed CD AUF
Aviation Gunners

	Frequency	Remarks
a. Weapons Fire Event USCG CD-AUF	1	1. May be completed during day or NVG 2. If weapons fire event not completed within preceding 10 days, then training must be completed prior next drug interdiction mission
b. Weapons Fire Event USN CD-AUF	1	1. Day only 2. If weapons fire event not completed within preceding 10 days, then training must be completed prior next drug interdiction mission

Continued on next page

D.4.q. Rotary Wing Air Intercept (RWAI)

	Frequency	Remarks
1. NVG RWAI Pilot		
a. RWAI Sorties	4	<p>1. A minimum of three RWAI sorties will be conducted under NVGs. RWAI Exercise may be counted as one of the four required sorties if four intercepts are completed.</p> <p>2. A minimum of 20 intercepts shall be completed during the semiannual period, at least 15 intercepts shall be NVG.</p> <ul style="list-style-type: none"> • Two hovering helo maneuvers (minimum of one NVG) shall be flown from the right seat during the semiannual period. <p>3. Interval between RWAI sorties shall not exceed 60 days. This interval may be extended to 90 days by unit CO.</p> <ul style="list-style-type: none"> • Pilots shall not be assigned to operational duties while within this waiver. <p>4. Each flight should contain a minimum of five intercepts with at least two head-to-head and one abeam maneuver.</p> <p>5. Flights may be accomplished from either seat. Quarterly (not to exceed 90 days), pilots shall conduct one NVG flight from the right seat, to include moving to the signal position.</p> <p>6. If a NVG pilot fails to maintain these minimums, but maintains those for day-only, he or she may still operate as a Day-Only RWAI pilot.</p> <p>7. If no recurrent training flight is conducted for six months, the pilot shall be RWAI unqualified until completing a RWAI Stan Check.</p>
b. RWAI Exercise	1	Includes vectors from an Air Defense Sector (ADS). Completion of an ATC Mobile RWAI P-Course may count as an exercise, but not as a recurrent training flight.
2. Day Only RWAI Pilot		
a. RWAI Sorties	2	<p>1. A minimum of ten intercepts shall be completed during the semiannual period.</p> <p>2. Interval between RWAI sorties shall not exceed 90 days.</p> <p>3. Each flight shall contain a minimum of five intercepts.</p> <ul style="list-style-type: none"> • A minimum of two shall be head-to-head maneuvers.

Continued on next page

	Frequency	Remarks
		4. May be accomplished from either seat. Within the 90-day period pilots shall conduct a minimum of one flight from the right seat, to include moving to the signal position and hovering helo maneuver.
		5. If no recurrent training flight is conducted for six months, the pilot shall be RWAI unqualified until completing a RWAI Stan Check
b. RWAI Exercise	1	Includes vectors from an Air Defense Sector (ADS). Completion of an ATC Mobile RWAI P-Course may count as an exercise, but not as a recurrent training flight.

D.4.q.(1) Rotary Wing
Air Intercept (RWAI)
(continued)

	Frequency	Remarks
3. ATC Mobile RWAI Pilot		
a. RWAI Intercepts	24	1. A minimum of 18 intercepts shall be completed under NVGs 2. If an ATC pilot will stand duty for an operational mission, a NVG RWAI flight must be completed within 31 days of the first day of duty. The flight will contain a minimum of six intercepts and shall be conducted from the right seat.

D.4.r. Specific
Semiannual Training
Minimum Requirements
for BVI and AVI Pilots
and Flight Mechanics

	Frequency	Remarks
1. BVI Compliant (Delivering boarding teams to compliant vessels)		
a. Target Sticks	6	1. A "stick" is terminology used to describe one complete fast roping evolution with at least two ropers 2. Minimum of four must employ NVGs (all may be done at night)
b. AVI (in addition to BVI requirements) (Delivering boarding teams to noncompliant vessels)		
(1) AVI Exercise	1	
(2) Formation Flight (Pilots only)	2	A minimum of one shall employ NVGs

Continued on next page

D.4.s. Specific
Semiannual Training
Minimum Requirements
for TVI Pilots and Flight
Mechanics

	Frequency	Remarks
Day Over Land Approaches	3	
Day Over Water Approaches	3	
NVG Over Land Approaches	3	
NVG Over Water Approaches	3	
NVG Formation Flight (hours) (Pilots only)	8	
Complete BVI minimums	1	TVI evolutions may count toward BVI training minimums
Complete Commandant (CG-711) approved MSRT RT Syllabus	1	

Section E. Minimum Recurrent Training Requirements for Coast Guard Pilots Assigned to Duty Involving Flying Proficiency (DIFPRO)

E.1. Overview

Pilots on DIFPRO orders shall maintain a current CP designation in not more than one type aircraft. The following requirements provide only minimum pilot proficiency in the aircraft. Commands supporting this program should give strong consideration to this proficiency prior to assigning the DIFPRO pilot to operational missions or overnight duty. DIFPRO pilots shall complete the following:

E.2. Calendar Year Minimums

- Standardization Check (Annual requirement – within 15 months of previous check)
- Swim Test
- Wet Drill
- Egress Breathing Device/Shallow Water Egress Training (R/W only)
- Emergency Ground Egress
- Crew Resource Management Training (every 24 months)

E.3. Semiannual Minimums

All apply to F/W and R/W DIFPRO pilots unless specified otherwise.

Flight Time (hours) - 24 minimum, 50 maximum.

Night Time (hours) – 2.0 minimum

Instrument Approaches for F/W and R/W:

- Precision – four minimum (two must be at night)
- Non-Precision – four minimum (two must be at night)
- One precision and one non-precision must be a landing at night (F/W only)
- Up to one-half of approach minimums may be completed in an approved flight simulator

E.4. Annual Instrument Rating

In order to maintain instrument currency a DIFPRO pilot shall complete all of the pilot instrument qualification requirements contained in section K of this chapter.

Any portion of the instrument qualification requirements may be completed in an approved simulator.

E.5. Lapse and Re-designation

If a DIFPRO pilot fails to successfully complete minimum recurrent training requirements, the pilot shall submit a letter to Commandant (CG-711) regarding failure to complete minimums. The DIFPRO pilot must meet the requirements for re-designation or re-qualification in section L of this chapter.

Continued on next page

E.6. Logbooks and Training Records

All aviators in a DIFPRO status will maintain control of their own logbooks and training records. It is the responsibility of the aviator to keep their logbooks and training records up-to-date in accordance with this manual.

All aviators in a DIFPRO status shall submit their logbooks to Commandant (CG-711) for approval and signature semiannually.

E.7. Underwater Egress Training

R/W pilots are required to complete Underwater Egress recurrent training every 72 months.

E.8. Low Pressure Chamber (LPC) Training requirements

DIFPRO pilots of pressurized aircraft capable of high altitude operations shall attend LPC recurrent training every 12 years.

The date of the LPC course attended shall be recorded in the individual's health record and training jacket.

E.9. Warm-Up Flight

All aviators in a DIFPRO status must comply with the warm-up requirements in accordance with section H of this chapter.

E.10. Employment Limitations

F/W pilots are authorized to fly on an aircraft in which an aircrew is maintaining a SAR ready status, however, the DIFPRO pilot shall not occupy the pilot's (left) seat.

R/W pilots are authorized to fly on an aircraft in which an aircrew is maintaining a SAR ready status, however, the DIFPRO pilot shall not occupy the pilot's (right) seat.

E.11. Waiver Requests

Waiver requests to this section shall be submitted to Commandant (CG-711) for approval. Waiver request shall contain sufficient detail for Commandant (CG-711) to determine the appropriate course of action required prior to granting waiver.

Section F. Compliance with Recurrent Training Requirements

F.1. Commanding Officer Responsibilities

Commanding officers and administrative seniors shall ensure that sufficient opportunities are afforded all crew members under their command to comply with prescribed minimum training requirements. Individual crew members, commanding officers, and administrative seniors are all responsible for ensuring that maximum training is obtained on all flights.

F.2. Pilots

The commanding officer shall submit a letter report to Commandant (CG-711) together with a statement from the crew member concerned, whenever the requirements of this chapter have not been met. This report shall be submitted within 30 days of the time when that aviator failed to maintain currency.

If a crew member fails to meet his or her minimum semiannual flight requirements, the report shall be submitted within 30 days following the end of the semiannual period. Commandant (CG-711) will review each case of noncompliance. The crew member shall be notified only if adverse action is to be taken.

F.3. Other Flight Crew Members

Unit training officers shall submit a letter report to the commanding officer via the chain of command, together with a statement from the flight crew member concerned whenever the requirements of this chapter have not been met. This report must be submitted within 30 days following the end of the period. The crew member shall not fly as a member of a Coast Guard aircrew pending a decision by the commanding officer regarding this status. The commanding officer may remove the individual from flight orders, allow additional training, or take other action as appropriate. The action taken will become a permanent part of the individual's training record.

Continued on next page

F.4. Prorated Requirements

The semiannual minimum flight requirements may be prorated for flight crew members who are not available for flying duty for a portion of that semiannual period because of PCS transfer, non-flying TAD, protracted emergency, sick leave, or similar circumstances. In this sense, "protracted" is meant to be more than 30 days. Semiannual requirements for individuals receiving an initial designation or change in designation may also be prorated. The semiannual requirement is the amount determined from the following table. Reduce the months remaining according to the following criteria (consecutive days absent).

0-14 days	No reduction
15-45 days	1 month
46-75 days	2 months
76-105 days	3 months
106-135 days	4 months
136-165 days	5 months
166 days to 6 months	No requirement

PRORATED AIRCREW MINIMUMS														
Months Remaining	Hours of Flight Time or Number of Events													
	48	24	12	11	10	9	8	7	6	5	4	3	2	1
5	40	20	10	9	8	7	7	6	5	4	3	2	2	1
4	32	16	8	7	7	6	5	5	4	3	3	2	1	1
3	24	12	6	6	5	5	4	4	3	3	2	2	1	1
2	16	8	4	4	3	3	3	3	2	2	1	1	1	1
1	One Standardization Check Flight													

Section G. Annual Proficiency Checks

G.1. Standardization Checks

Each flight crew member shall satisfactorily complete an annual (within 15 months, day to day, of previous check) standardization flight check in each type in which he or she holds a designation. Flight crew members will receive check in their primary aircrew position. This check shall be given by a member of the unit FEB or, at the discretion of the commanding officer by an instructor attached to a standardization unit.

The standardization check for pilots shall be the same as the designation flight check for the crew position being evaluated, with emphasis being placed upon emergency procedures and maximum performance maneuvers.

Standardization checks for HC-130 BAs and LMs may be conducted on the ground.

Flight Engineer standardization checks (excluding initial qualification) may be conducted in a simulator by a qualified Flight Examiner.

All other standardization checks shall be conducted in-flight. A standard evaluation check sheet, promulgated by the applicable standardization unit, shall be used for the check. Each crew member shall demonstrate satisfactory proficiency in all areas of the standardization check. The standard of performance for any standardization check item shall be the same as the standard for initial designation. A satisfactorily completed closed and/or open book examination on critical aircraft systems, emergency procedures and limitations is a required part of the standardization check.

All F/W aircrew shall don and use oxygen equipment during annual standardization checks.

The standardization check may be performed in the simulator for CGAS Washington pilots.

G.2. Pilot SAR Procedures Check

All pilots who hold FP or AC designations in aircraft having a SAR mission shall be required to satisfactorily complete an annual (within 15 months, day to day, of previous check) SAR procedures check. This check may be given in conjunction with the annual standardization flight check. A member of the unit Flight Examining Board shall give this check or, at the discretion of the commanding officer, a pilot attached to the standardization unit.

SAR procedures checks shall include, as a minimum:

- Search planning and procedures
- Delivery of rescue equipment
- Hoisting (R/W)
- Simulated instrument or night instrument approach to a hover (R/W)

A standard evaluation check sheet, promulgated by the applicable standardization unit, shall be used for the check.

Continued on next page

**G.3. AUF
Standardization
Tactics Checks**

All AUF qualified pilots shall complete an annual standardization tactics flight evaluation demonstrating proficiency in those maneuvers specified in the check flight portion of the Commandant (CG-711) approved tactics training course. A member of the unit Flight Examining Board shall give this check or, at the discretion of the commanding officer, a pilot attached to the standardization unit.

G.4. NVG Check

Each rotary wing pilot (except pilots in DIFPRO assignments) shall satisfactorily complete an annual (within 15 months, day to day, of previous check) NVG flight check in each type in which he or she holds a designation. This check shall be given by a member of the unit FEB or, at the discretion of the commanding officer, by an instructor attached to a standardization unit.

The NVG check shall emphasize emergency procedures and maximum performance maneuvers. A standard evaluation check sheet, promulgated by the applicable standardization unit, shall be used for the NVG check. Each crew member shall demonstrate satisfactory proficiency in all areas of the NVG check. The standard of performance for any NVG check item shall be the same as the standard for initial designation.

**G.5. Aviation
Gunner
Standardization
Checks**

All qualified Aviation Gunners shall complete an annual tactics check demonstrating proficiency in those maneuvers specified in the check flight portion of the Commandant (CG-711) approved aviation gunner training course. A member of the unit flight examining board shall give this check or, at the discretion of the commanding officer, an aviation gunner instructor attached to the standardization unit.

G.6. RWAI Check

All RWAI qualified pilots shall complete an annual (within 15 months, day to day, of previous check) standardization flight evaluation demonstrating proficiency in those maneuvers specified in the check flight portion of the Commandant (CG-711) approved RWAI training program. A standard evaluation check sheet, promulgated by the applicable standardization unit, shall be used for the check. The standard of performance for RWAI Check items shall be the same as the standard of performance for initial designation.

G.7. TVI Check

All TVI qualified pilots shall complete an annual (within 15 months, day to day, of previous check) standardization flight evaluation demonstrating proficiency in those maneuvers specified in the check flight portion of the Commandant (CG-711) approved TVI training program. This flight may be combined with the annual AUF Check. A standard evaluation check sheet, promulgated by the applicable standardization unit, shall be used for the check. The standard of performance for TVI Check items shall be the same as the standard of performance for initial designation.

Section H. Miscellaneous Proficiency Requirements

H.1. Pilot Shipboard Helicopter Training

Pilot Shipboard Helicopter training requirements are listed in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

H.2. Rescue Swimmer Requirements

For specific rescue swimmer requirements, see the Coast Guard Helicopter Rescue Swimmer Manual, COMDTINST M3710.4 (series).

H.3. Pilot Warm-Up Flight

Any pilot who has not flown in his or her primary crew position (in-flight or in an approved simulator) during the previous 30 days will be required to fly a warm-up flight prior to flying in that crew position on an operational mission. An AC or FP who has not flown in his or her primary crew position (in-flight or in an approved simulator) during the previous 30 days will be required to fly a warm-up flight prior to being assigned as pilot in command. Any pilot deployed aboard a ship who has not flown in his or primary crew position (in-flight or in an approved simulator) during the previous 21 days will be required to fly a warm-up prior to flying in that crew position on an operational mission. An AC or FP deployed aboard a ship who has not flown in his or her primary crew position (in-flight or in an approved simulator) during the previous 14 days will be required to fly a warm-up prior to being assigned as pilot in command.

These requirements are for individual flight currency and are separate from the minimum recurrent training requirements stated in section E and table 8-2. Commands are to prescribe an appropriate syllabus to accomplish this purpose.

H.3.a. Aircrew Warm-Up Flight

An aircrew member that has not flown in his or her primary aircrew designation (in-flight or in an approved simulator) during the previous 30 days is required to fly a warm-up training flight in their primary aircrew designation prior to flying in that crew position on an operational mission. For C-130H, a designated flight engineer or navigator who has not flown in his or her primary crew position in the previous 30 days is required to fly a warm-up flight with a crew member current in that crew position. The primary aircrew designation (e.g., FM, DM, and RS) denotes a level of achievement in type above the member's secondary and basic aircrew designation. Basic Aircrew (BA) qualification is retained when an individual advances to a primary or secondary designation. See table 8-3.

These requirements are for individual flight currency and are separate from the minimum recurrent training requirements stated in section E and table 8-2. Commands are to prescribe appropriate warm-up ground and flight training.

Continued on next page

Table 8–3.

Primary Designation	FM (2)	HQBA (2)	RS	BA	AMS (1)	AVI	DM (3)	R	N (3)	FE (3)	AG
Secondary Designation	HQBA						LM		R		
Basic (initial) Designation	BA	BA	BA			BA	BA	BA	BA	BA	BA
Note: SSO and TSO aircrew positions do not require a 30-day warm-up.											
(1) Non-aviation rated personnel.											
(2) FMs and HQBAs will participate in at least one in-flight hoist operation every 90 days. If a member does not meet this requirement, the member shall complete a hoist warm-up flight prior to flying as a FM or HQBA on an operational flight. Commanding Officers, with Commandant (CG-711) approval, may waive the 90 day requirement during unique environmental or operational situations.											
(3) C-130H Flight Engineers, Loadmasters, and Dropmasters are considered current for assignment as a Basic Aircrew, and do not receive annual Standardization BA check flights. Navigators are considered current and qualified as a Radioman, and do not require a check flight in the Radio position. Navigators and Radioman are not considered current or qualified as a Basic Aircrew.											

Continued on next page



H.4. Fixed Wing Air Intercept Training

Air Intercept training requirements are prescribed in the Air Interdiction Procedures Manual, COMDTINST M3710.3 (series).

Section I. Other Periodic Training

I.1. Low-Pressure Chamber (LPC) Training

All pilots of pressurized aircraft capable of high altitude operations shall attend LPC recurrent training every 12 years. Enlisted aircrew are not required to attend LPC recurrent training. The date of the LPC course attended shall be recorded in the individual's health record and training jacket.

I.2. Physiological Training

All aircrew of pressurized aircraft capable of high altitude operations will receive annual aviation physiological training. A Flight Surgeon or an aviation physiologist shall conduct training. Make-up training may be given by means of a computer based presentation previewed and authorized by a Flight Surgeon specifically for this purpose. The presentation must comprehensively cover all items required in the paragraphs below.

Training shall concentrate on the subject of night adaptation, hypoxia, symptoms of hypoxia, and the importance of immediately donning oxygen equipment. It is expected that at least one hour will be devoted to the subject of hypoxia and the physiological effects of pressurized and unpressurized flight.

Physiological training may be conducted along with other wellness training. Strong emphasis should be placed on the potential negative impact of smoking, caffeine, and alcohol, and the benefits of physical fitness. It is particularly important to emphasize the physiological changes that can be anticipated as the body ages.

I.3. Night Adaptation Training

If USN or USAF night vision training facilities are available, flight crew members should attend such a training course in conjunction with low-pressure chamber training. The date an individual attends a night vision training course shall be recorded in his health record and training jacket.

I.4. Water Survival Training

I.4.a. Swim Test

All aviation personnel on Duty Involving Flying - Operations (DIFOPS) orders or temporary flight orders shall participate in a swim test. During the swim test, the aircrew member must successfully complete a 75-yard swim — while wearing an uninflated, normally equipped life vest, flight suit (not ADC) and boots — using the crawl stroke, breast stroke, back stroke, side stroke, or a combination thereof.

During the swim, the individual shall demonstrate comfort, not necessarily form, in the stroke(s) used. All helicopter crew members shall also practice treading water or drown proofing for a minimum of two minutes. It is the responsibility of the command to provide this training for all assigned personnel. The intent of this requirement is to ensure that every crew member (with the exception of CGAS Washington personnel) participates in this training every calendar year.

NOTE

The “normally equipped survival vest” may be replaced by a training vest with the pocket survival items replaced by two pounds of lead shot.

Continued on next page

I.4.b. Wet Drill

Each calendar year (with the exception of CGAS Washington personnel), the trainee shall receive instruction in water survival techniques, equipment, and wearing flight suit or aircrew dry coverall (ADC), and survival vest, shall enter and remain in the water for at least 10 minutes. An offshore site where moderate sea conditions exist is preferable to a swimming pool, lake, or sheltered harbor since offshore sea conditions are those likely to be encountered in a survival situation.

While in the water, the trainee must inflate the survival vest orally; locate and deploy the items of survival equipment it contains, as practicable, and note the effort required to swim and remain in a stable flotation posture in the prevailing water conditions. The trainee shall then enter a one-person raft, or multi-person raft. For those trainees who fly parachute equipped aircraft, parachute disentanglement training shall be included.

NOTE

Personnel shall not enter the water during any training unless wearing the appropriate level of garment protection for the existing air/water temperature as prescribed in [Chapter 4](#) and [Chapter 7](#) of this manual.

I.4.c. Underwater Egress Training

Helicopter crew members shall attend Underwater Egress Training at least once every 72 months at a Commandant (CG-711) approved Underwater Egress Trainer. Pilots scheduled for an annual Proficiency Course during the quarter in which their underwater egress training currency lapses may be granted an extension by the commanding officer (not to exceed three additional months), and not to extend beyond that quarter which coincides with the Proficiency Course.

I.4.d. Egress Breathing Device/Shallow Water Egress Training (SWET)

Helicopter crew members shall attend Egress Breathing Device/Shallow Water Egress Training (SWET) every calendar year. Extensions not to exceed three additional months are authorized to accommodate scheduling in conjunction with wet drills and swim tests. If not current, R/W crews must complete SWET training within 60 days of arrival at the unit.

I.4.e. Refusal to Participate

Refusal to participate in or complete any of the water survival training requirements is sufficient cause for removal from flight status. The commanding officer shall submit a letter report regarding the member's refusal, removal from flight status, and termination of designation in accordance with the provisions of the Personnel Manual, with a copy to Commandant (CG-711).

Continued on next page

I.4.f. Failure to Satisfactorily Complete	<p>Individuals who fail to fulfill the water survival training requirements (except Underwater Egress Trainer and Egress Breathing Device/Shallow Water Egress Trainer (SWET) as specified below) shall not fly as a flight crew member until that requirement is successfully completed. The unit may provide remedial training. The commanding officer shall determine when sufficient remedial training has been provided. If the individual still cannot complete the water survival training requirements, he or she shall be removed from flight status and their aviation designation terminated in accordance with the Personnel Manual, COMDTINST M1000.6 (series).</p>
I.4.f.(1) Underwater Egress Training	<p>Coast Guard trainees who fail to satisfactorily complete the Underwater Egress Trainer (UET) in accordance with DOD standards shall be provided with a Coast Guard performance evaluation completed by DOD instructor personnel. The form shall be filed in the individual's training record. Commanding officers shall compare the Coast Guard Underwater Egress Training performance evaluation with the pass/fail criteria listed below and take the action indicated:</p>
I.4.f.(1)[a] Noncritical Category	<p>If the reason for failure is in the noncritical category, the commanding officer may issue a written waiver, citing this manual as authority, allowing the individual to remain on flight status. A copy of the waiver shall be filed in the individual's training jacket.</p>
I.4.f.(1)[b] Critical Category	<p>If the reason for failure is in the critical category, the individual shall be grounded.</p> <p>If, in the commanding officer's judgment, the individual can be trained in a reasonable length of time to the competence necessary to subsequently complete the Underwater Egress Training course through remedial swimming training, then that shall be attempted. Otherwise, action should be initiated immediately to remove the individual from flying status.</p>
I.4.f.(2) Egress Breathing Device/Shallow Water Egress Training (SWET)	<p>Although this training is mandatory, failure does not restrict personnel from aviation duties. Personnel who fail must be counseled that, in all likelihood, they will be unsuccessful if they attempt to use the Egress Breathing Device during an actual underwater egress. Evidence of the failure and counseling must be entered in the person's Aircrew Training Record.</p>
I.5. Proficiency Simulator Courses	<p>Each pilot on DIFOPS orders, for which there is an approved proficiency simulator course of instruction, shall attend such course of instruction annually (within 15 months, day to day, of previous simulator course, transition course or re-qualification course). A First Pilot upgrade syllabus may be completed in conjunction with a proficiency simulator course. Pilots assigned to CGAS Washington shall complete proficiency simulator training semiannually (within 12 months, day to day, of previous simulator course, transition course or re-qualification course). Commandant (CG-711) will maintain a list of proficiency simulator courses approved for Coast Guard training.</p>

Continued on next page

I.6. Emergency Ground Egress Training

All aviation personnel assigned to air units shall, at least once each calendar year, receive emergency ground egress training in each type aircraft and from each crew position in which a qualification is held.

This training will consist of a lecture on basic principles, followed by actual operation of the exits, and associated equipment.

I.7. Operational Hazard Awareness Training

An operational hazard is any condition or act that affects or may affect the safety of Coast Guard aircraft or associated personnel or equipment. Operational hazards may include, but are not limited to, inadequacies, deficiencies, or unsafe practices in the following areas:

- Weather services and facilities.
 - Aircraft maintenance or inspection.
 - Operation and maintenance of airfield facilities and services.
 - Aircraft ground support services.
 - NAVAIDs (en route and approach facilities).
 - Procedures, techniques, and instructions in management of air traffic.
 - Regulations, procedures, or policies published by FAA, ICAO, or DOD.
 - Flight Publications.
 - General and local hazards associated with ground taxi operations. Other applicable areas (e.g., low-level wires, remote landing sites, high-density traffic areas, fixed structures, light poles).
-

I.7.a. Operational Hazard Training Cycle

Commanding officers shall ensure that local operational hazard awareness training is incorporated into the unit training program to instill personal awareness and to reduce mishap potential. This training shall be provided to all pilots and aircrew members on initial assignment to the unit and annually thereafter.

I.8. Land Survival Training

All aviation personnel assigned to air units should receive training in land survival techniques and equipment every calendar year. The training received shall be tailored to each unit to suit the terrain, climate, and resources available within the area of operations (AO) most likely to be encountered.

I.9. Crew Resource Management (CRM) Training

Human error mishaps account for approximately 80% of aviation mishap losses in the Coast Guard. CRM training is a valuable tool aimed at reducing human error mishaps by improving individual and crew performance.

Continued on next page

I.9.a. CRM Training Skills

CRM training courses concentrate on improving individual performance and teamwork (crew) skills by emphasizing the following objectives.

- Determining and analyzing ones own personality traits as they relate to aircrew interaction and problem solving
- Improving personal and crew communication skills
- Developing and improving participation as an individual and crew member in a positive and assertive manner
- Developing and enhancing individual and crew situational awareness skills
- Identifying hazardous trends and attitudes through analysis of past human factor mishaps

Presenting a risk management methodology that can help individuals and crews identify and prevent or mitigate hazardous situations.

I.9.b. CRM Training Schedule

- Initial CRM training provides an essential cultural foundation by emphasizing the importance of CRM skills. Refresher CRM reinforces initial skills taught and ensures the crew member's CRM skills mature commensurate with their aviation experience.
 - Initial CRM training (two-day course) will be completed within one year of assignment to pilot or aircrew status and recorded in the aircrew member's training record and the AMMIS database. Approved CRM Initial training may be completed by CRM cadre of ATC Mobile, ATTC Elizabeth City, NC, the C-130 Standardization Team, or Commandant contracted civilian maintenance or flight training. The USAF Initial CRM Training offered at Little Rock AFB meets the requirements for the Coast Guard Initial CRM Course. The one year initial training window allows unit flexibility and provides new aircrew members an opportunity to obtain actual operational experience before CRM initial training.
 - Refresher CRM training is required annually (annual requirement – within 15 months of initial or previous refresher CRM training date). Refresher training is now part of the annual pilot proficiency course curriculum at ATC Mobile. C-130 pilots (and some aircrew) receive their refresher training at McChord AFB in conjunction with their annual proficiency course. In addition, a CRM refresher course has been developed for presentation by unit FSOs.
-

I.9.c. Failure to Complete

Aviation personnel failing to complete the CRM Initial Course or CRM Refresher Course on schedule shall request a waiver in writing from Commandant (CG-711) prior to continuing operational flying.

Section J. Special Qualification Requirements

J.1. Overview

Shipboard-Helicopter and Air Intercept qualifications are adjunctive qualifications to the pilot designation.

J.2. Shipboard-Helicopter Qualifications

Requirements are specified in the Shipboard-Helicopter Operational Procedures Manual, COMDTINST M3710.2 (series).

J.3. Aviation Special Missions (ASM)

To become qualified to perform the Aviation Special Missions below, pilots shall complete the appropriate Commandant (CG-711) approved ground and flight syllabi, and additional courses of instruction as required:

- Airborne Use of Force (AUF)
- Airborne Use of Force Counter Drug (AUF CD)
- Airborne Use of Force Counter Terrorism/Tactical Vertical Insertion (MSRT)
- Vertical Insertion (VI)
- Rotary Wing Air Intercept (RWAI)

Basic requirements for ASM qualifications are listed below. Additional requirements are specified in ASM Tactics, Techniques and Procedures Manual, COMDTINST M16601.20 (series).

J.3.a. Airborne Use of Force (AUF)

To become qualified to perform Airborne Use of Force (AUF) missions, pilots shall meet the following requirements:

Complete Coast Guard AUF policy training (all)

Right Seat:

- Minimum of an FP Designation
- Complete a Commandant (CG-711) approved right seat gunnery and tactics syllabus

Left Seat:

- Complete a Commandant (CG-711) approved left seat gunnery and tactics syllabus

AMC (for multiple aircraft operations):

- Complete a Commandant (CG-711) approved AMC syllabus
-

Continued on next page

J.3.b. Counter Drug
Airborne Use of Force
(CD AUF)

To become qualified to perform the Counter Drug Airborne Use of Force (CD AUF) missions, pilots shall meet the following requirements:

Complete a Commandant (CG-711) approved ground and flight syllabus appropriate for the level of designation/qualification (CP, FP, AC, AMC)

Complete a written open book examination on AUF policy and evidence gathering procedures

Flight experience requirements:

- Previous DOD PIC or USCG AC Designation
- 1000 hours of total pilot time in military aircraft
- 500 hours R/W
- 50 hours NVG

Additional flight experience requirements for AUF AMC:

- 50 hours AUF mission experience
- Complete one AUF CD deployment before designation

J.3.c. Counterterrorism
Airborne Use of
Force/Tactical Vertical
Insertion (MSRT)

To become qualified to perform Counterterrorism Airborne Use of Force/Tactical Vertical Insertion (MSRT) missions, pilots shall meet the following requirements:

Complete a Commandant (CG-711) approved ground and flight syllabus appropriate for the level of designation/qualification (CP, FP, AC, AMC).

Complete a written open book examination on AUF policy

Flight experience requirements:

- Previous DOD PIC or USCG AC Designation
- 1000 hours of total pilot time in military aircraft
- 500 hours R/W
- 50 hours NVG

Additional flight experience requirements for MSRT AMC:

- 50 hours AUF mission experience
- Complete one MRST deployment as AMC under instruction before designation

Continued on next page

J.3.d. BVI

To become qualified to perform BVI missions, pilots shall meet the following requirements:

BVI:

- Minimum of an FP Designation
- Complete a Commandant (CG-711) approved BVI syllabus

J.3.e. AVI

To become qualified to perform AVI missions, pilots shall meet the following requirements:

- BVI Qualification
- Complete a Commandant (CG-711) approved AVI syllabus

AMC for multiple aircraft operations (AVI only):

- Complete a Commandant (CG-711) approved AMC syllabus

J.3.f. Rotary Wing Air Intercept (RWAI)

To become qualified to perform Rotary Wing Air Intercept (RWAI) missions, pilots shall meet the following requirements:

- Minimum of an FP Designation. A waiver may be obtained from Commandant (CG-711) for pilots flying in direct support of the NCRAD mission at the request of the Commanding Officer, CGAS Atlantic City.
- Complete a Commandant (CG-711) approved Ground, NVG Closure and Formation Flight, and RWAI qualification syllabi.

J.3.g. Fixed Wing Air Intercept (FWAI)

Requirements for pilots and Sensor System Operators (SSO) are specified in the Air Interdiction Procedures Manual, COMDTINST M3710.3 (series).

Section K. Pilot Instrument Qualification

K.1. Authority

Instrument ratings may be issued or revoked by commanding officers of air stations and by Commandant (CG-711). Instrument ratings issued by other Military Services have the same validity as Coast Guard issued instrument ratings.

K.2. Effective Period for Instrument Ratings

The maximum valid period for instrument ratings is 15 months day to day, from the date of the last instrument check.

Pilots are responsible for ensuring that their instrument ratings remain current.

Currency shall be validated by completing a successful instrument check flight and exam before the end of the effective period.

K.2.a. Lapse of Instrument Qualification

If a pilot's instrument qualification lapses due to failure to successfully complete an instrument check within the effective period, the pilot lapses to unqualified.

K.2.b. Instrument Re-qualification

If a pilot's instrument qualification lapses due to failure to successfully complete an instrument check within the effective period, the pilot shall pass an instrument check flight for re-qualification.

K.3. Classification of Instrument Ratings

Instrument pilot ratings are issued in two categories - F/W and R/W.

K.4. Validity in Category

An F/W instrument rating shall be valid in all types of F/W aircraft for which the pilot holds a designation.

An R/W instrument rating shall be valid in all types of R/W aircraft for which the pilot holds a designation.

Instrument ratings remain valid upon PCS.

K.5. Minimum Requirements for Instrument Rating

The following minimum requirements must be met by a pilot before being issued a Coast Guard instrument rating:

- Be a graduate of a military flight training program.
- For initial rating in each aircraft category, satisfactorily complete an instrument flight syllabus in category.
- Complete the written examination prescribed in paragraph K.6.
- Complete the instrument flight check prescribed in for each aircraft category for which an instrument rating is to be issued. Instrument check flights may be conducted in ATC Mobile flight simulators.
- Minimum requirements for instrument ratings issued by another Military Service shall be determined by that service.

Continued on next page

**K.6. Instrument
Written
Examination
Requirements**

Before issuance of an instrument rating, all pilots shall complete an open-book written examination covering the following:

- Pertinent Coast Guard instructions and procedures
- Pertinent Federal Aviation Regulations, other applicable regulations, and pertinent aeronautical publications (e.g., FLIP General Planning)
- Interpretation of weather information normally used in flight planning
- Voice radio procedures

This examination is intended to ensure a thorough and orderly annual review of the subjects listed. The examination shall cover each reference publication in turn, following the format of the publication. The examination should include new and revised air traffic control procedures and should be reviewed frequently to ensure currency.

**K.7. Instrument
Flight Checks**

Before issue of an instrument rating, all pilots are required to successfully complete an instrument flight check, either in-flight or in an approved simulator, in each category in which designated.

All instrument checks shall be conducted by a member of the unit Flight Examining Board or, at the discretion of the commanding officer, an instructor assigned to designated standardization unit, and should consist of at least the following:

K.7.a. Part I

Basic Flying (initial instrument check only). This part shall be given under simulated instrument conditions only and shall include at least the following:

- Timed turns - level, climbing, descending
- Steep turns
- Recovery from unusual attitudes

Continued on next page

K.7.b. Part II

- Plan and file an actual or simulated instrument flight on airways.
- Perform instrument takeoff.
- Fly an actual or simulated ATC clearance to a destination and execute a published instrument approach.
- Demonstrate ability to satisfactorily fly instrument approaches to minimums, accomplishing at least one Instrument Landing System (ILS) approach, one Precision Approach Radar (PAR) approach, one Automatic Direction Finder (ADF) approach, and one other type of non-precision approach where facilities are available. If a PAR approach is not readily available, it shall be replaced with a second precision approach. F/W aircraft instrument flight checks shall include at least one circling approach.
- Demonstrate a thorough knowledge of, and ability to perform a holding pattern.
- Demonstrate a thorough working knowledge of the operation and use of all installed communication and navigation equipment.
- Demonstrate ability to cope with emergency situations that logically might be expected to occur on an instrument flight. Check pilots shall ensure that simulated emergencies do not place the aircraft in a hazardous position. In addition, simulated failures should not be compounded to the point that there is only a remote chance that such failures could occur in actual instrument flight.

K.7.c. Exceptions

- If a particular maneuver cannot be accomplished due to availability of facilities (e.g., PAR), that maneuver may be waived. It shall be performed for a designated Flight Examiner at the earliest opportunity.
 - Maneuvers to be accomplished on instrument flight checks conducted by another Military Service shall be determined by that Service.
-

Section L. Lapse and Redesignation

L.1. Lapse

Designations shall lapse as follows:

L.1.a. FP and AC

When minimum requirements prescribed by this manual have not been met, including NVG minimums, designation reverts to CP.

L.1.b. CP

When minimum requirements prescribed by this manual have not been met (including NVG minimums) or six months after the last flight in type, the individual lapses to unqualified.

L.1.c. All Other Flight Crew Member Designations

When the minimum requirements prescribed by this manual have not been met or six months after last flight in type has passed, flight crew members lapse to Basic Aircrew member, provided requirements for Basic Aircrew member have been met. If Basic Aircrew member requirements have not been met, the individual lapses to an unqualified status.

L.1.d. Instructors/Flight Examiners

When minimum qualifications prescribed by this manual have not been met (including NVG minimums), the designations lapse and a re-qualification must take place as prescribed in section C of this chapter. Designations also lapse upon PCS transfer. The commanding officer of the gaining unit may accept prior Instructor or Flight Examiner designations that are current without re-qualification.

L.2. Failure of Standardization/SAR/Instrument Checks

L.2.a. Standardization/Instrument Checks

If an individual fails a standardization or instrument check, the individual lapses to unqualified.

L.2.b. SAR Procedures Check

If pilot fails a SAR procedures check, the individual lapses to copilot designation.

L.3. Lapse of Special Qualification

L.3.a. Shipboard-Helicopter

When Shipboard-Helicopter qualification lapses, the individual Shipboard-Helicopter qualification lapses to unqualified.

L.3.b. Air Intercept

When minimum recurrent training requirements prescribed by this manual have not been met or six (6) months after the last flight in type has passed, the individual Air Intercept qualification lapses to unqualified. Lapse of Air Intercept qualification has no effect on the pilot or HU-25C sensor systems operator designation.

Continued on next page

L.4. Re-designation**L.4.a. General**

If a flight crew member's designation lapses, he or she shall not be assigned the duties of the lapsed designation.

L.4.b. Lapse Due to Failure to Meet Minimum Requirements

If a flight crew member's designation lapses due to a failure to meet the minimum requirements, a designation check flight, which encompasses the incomplete maneuvers, is required for re-designation.

L.4.c. Failure of Standardization/SAR Procedures/NVG Instrument Check

If a flight crew member's designation lapses due to failure of standardization, SAR procedures, NVG, or instrument check, the individual shall receive additional training in the area(s) of deficiency and shall pass a check flight for re-designation.

L.4.d. Lapse Due to No Flights Within Previous Six Months

If a crew member's designation lapses due to no flights within the previous six months, a designation check flight is required for re-designation. For crew members designated in more than one model of the same type of aircraft (e.g. HU-25 SSO), a Commandant (CG-711) approved ground syllabus may be substituted for a designation check flight.

L.4.e. Lapse Due to No Flights Within Previous Year

If a crew member has no flights within one year, the individual must follow the re-qualification process for each aircraft type as follows:

- All pilots must complete a Commandant (CG-711) approved re-qualification course.
 - C-130 Aircrew - Refer to C-130 Flight Manual, 1C-130-1, Appendix A, table A-1, Flight Crew Member Re-qualification Chart.
 - HU-25 Aircrew - Must complete the entire ground and flight phase of the appropriate aircrew syllabus to become re-qualified.
 - H-65/H-60 Aircrew - Must complete the ground phase and abbreviated syllabus to become re-qualified as a Flight Mechanic. There is no abbreviated course for the Basic Aircrew.
-

L.4.f. Additional Requirements

Commanding officers may prescribe additional training before re-designation.

L.4.g. Pilot Designation Lapse Due to Duty Including Flying – Denied (DIFDEN)

Pilots ordered to DIFOPS/DIFPRO assignments that have lapsed due to no flights within one year because of DIFDEN assignments shall complete a Commandant (CG-711) approved re-qualification course.

L.5. Airborne Use of Force

Pilots failing to meet recurrent training minimums lapse to noncurrent for AUF.

L.5.a. PWCS AG AUF Units

To regain currency, a pilot must complete a NVG Tactics Check with an AUF IP before conducting AUF missions.

Continued on next page

L.5.b. CT AG AUF Units

To regain currency, a pilot must act as Mission Commander completing a NVG Tactics Check.

L.5.c. CD AG AUF Units

A pilot failing to meet Tactics Flight minimums must complete a NVG Tactics Check with an AUF IP. A pilot failing to meet Gunnery Flight minimums must complete a Gunnery Flight with an AUF IP.

L.5.d. Additional Training Requirements

Commanding officers may prescribe additional training prior to the pilot regaining currency.

L.6. Basic Vertical Insertion

Failure to meet recurrent training minimums results in the pilot lapsing to noncurrent for BVI.

To regain currency, one BVI training flight to include one day stick and one night stick (employing NVGs) must be completed with a current BVI AC before conducting any operational deployments.

L.6.a. Tactical Vertical Insertion

Failure to meet recurrent training minimums results in the pilot lapsing to noncurrent for TVI.

To regain currency, one TVI training flight to include one day stick and one night stick (employing NVGs) must be completed with a current TVI IP before conducting any operational deployments.

L.7. NVG RWAI

After 60 days without a recurrent training flight or after 90 days without a flight from the right seat, the pilot maintains NVG RWAI qualification but shall complete a minimum of one NVG RWAI training flight from the right seat, including movement to the signal position, prior to performing operational mission duties. If no recurrent RWAI flight is conducted for 6 months, the pilot shall be RWAI unqualified until completing a NVG RWAI standardization check. If a NVG RWAI pilot fails to maintain NVG RWAI minimums but maintains Day Only RWAI minimums, he or she may still operate as a Day Only RWAI pilot.

Pilots who have completed the NVG RWAI pilot initial qualification but are maintaining Day Only RWAI currency may regain NVG RWAI qualification through the completion of 2 RWAI training flights, completing a minimum of 10 NVG intercepts, followed by a NVG RWAI standardization check. Each of these flights shall include a minimum of 5 intercepts of which a minimum of 3 shall be head-to-head maneuvers, and moving to the signal position. Pilots shall conduct both of these flights from the right seat.

L.7.a. Day Only RWAI

After 90 days without a recurrent training flight or after six months without a flight from the right seat, the pilot retains Day Only RWAI qualification but shall complete a flight from the right seat, including movement to the signal position, prior to performing operational missions. If no recurrent RWAI flight is conducted within six months, the pilot shall be RWAI unqualified until completing a Day RWAI standardization check.

Continued on next page

**L.8. Lapse Due to
No Flights Within
Previous Year**

If a pilot does not conduct a flight within one year for a specific ASM category, the pilot will become unqualified in that category. To regain qualification, the pilot must complete the appropriate Commandant (CG-711) approved re-qualification syllabus.

Section M. Approved Simulators

M.1. Overview

The ATC Mobile Flight Simulators for the H-60, H-65, and HU-25 are authorized simulators for purposes of this manual. The H-60 and H-65 flight simulators are authorized NVG compatible simulators. Flight simulators operated by the Air Force, Navy, Marine Corps, and those approved by the FAA for the C-130, C-143, C-37, and the C-20 are authorized simulators for purposes of this manual.

Section N. Coast Guard Aviator Evaluation Board

N.1. Convening the Board

The Coast Guard Aviator Evaluation Board is convened by Commandant on an "as needed" basis. When necessary, the Board evaluates the performance, potential, and motivation for continued service of Coast Guard aviators in a flight status. The Board acts in an advisory capacity to the Commandant, and its actions are non-disciplinary in nature. Normally, only the more aggravated cases will be considered by the Board. Specific information concerning this Board can be found in the Personnel Manual, COMDTINST M1000.6 (series).

N.2. Submission of Reports for Consideration by Board

In the event that a commanding officer develops serious doubts as to a pilot's performance, potential, or motivation, he or she shall make a thorough investigation and, if warranted, report the results by letter to the Coast Guard Personnel Command (CGPC-opm) in accordance with the Personnel Manual M1000.6 (series).

Section O. Duties and Responsibilities of Standardization Units

O.1. General

Standardization units are designated to ensure a high degree of standardization in all procedures performed by flight crew members. Coast Guard Aviation standardization units are as follows:

- H-60, H-65, HU-25, Ship-Helo, and Rescue Swimmer: ATC Mobile
 - C-130H: ATC Mobile (personnel detached duty to Air Station Clearwater)
 - Aviation Special Missions: ATC Mobile
-

O.2. Standardization

Standardization personnel at each standardization unit are responsible for, but not limited to, the following:

Defining the duties of each crew member designation.

Defining the skills necessary to complete each defined duty.

Developing standard procedures to use in the completion of each duty.

Determining the performance standards required by the flight manual, and ensuring that these additional performance standards are promulgated to all appropriate units.

At the direction of Commandant (CG-711) conducting evaluations of air station standardization programs. Representatives of the standardization units shall make periodic visits to operating units to:

- Check the unit's adherence to standard operating procedures
- Ensure desired skills and standard procedures are taught
- Provide refresher training and enhance the professional knowledge of the unit's flight crew members
- Evaluate the flight crew training program
- Provide reports to air unit commanding officers

If deficiencies in training syllabi or courses are noted during unit visits, standardization personnel shall coordinate with Commandant (CG-711), and others involved in the training process to make appropriate corrections.

Continued on next page.

Continued on next page

O.2.a. Standardization
(continued)

Reviewing and recommending the initial content of standardized Coast Guard Institute training courses for initial and specialty designations. Determining content of standardized training syllabi for use as part of these courses.

Developing and maintaining, for approval by Commandant (CG-711), standardized designation, upgrade, and recurrent flight training syllabi, which are not otherwise provided by the Coast Guard Institute or other approved sources, for all flight crew members.

Recommending appropriate changes to Institute courses and/or syllabi as individual aircraft flight manuals change.

Developing a standardized flight evaluation check for each designation to be used during the airborne portion of the annual standardization check.

Maintaining close liaison with other units and agencies that operate similar aircraft and have comparable flight crew designations.

Assisting in the review and preparation of changes to flight manuals for type aircraft.

Recommending additions or deletions of various equipment to enhance the operational efficiency and safety in type aircraft.

Assisting in the review of aircraft configuration changes.

Assisting in the review of aircraft accident analysis.

Maintaining an ongoing evaluation and certification program of aerial delivery equipment.

This Page Intentionally Left Blank

Chapter 9

RECORDS AND REPORTS

Introduction

Consistent management and logging of records is essential to the administration of the aviation program. This chapter provides reporting requirements and guidance for record keeping.

In this chapter

This chapter is divided into nine sections:

- Aviation Logistics Management Information System (ALMIS)
 - Logging of Flight Time
 - Flight Pay Entitlement Requirements
 - Classification of Flights by Coast Guard Aircraft
 - Aircraft Logbook
 - Aviators Flight Logbook
 - Change of Pilot Designation and Qualification
 - Abstract of Operations Report
 - Miscellaneous Records and Reports
-

Section A. Aviation Logistics Management Information System (ALMIS)

A.1. Overview

The Aviation Logistics Management Information System (ALMIS) is a browser based application that was designed to interface with the two existing legacy database systems. Data can be input or retrieved on any Standard Work Station III by users that have login access.

The data for the Electronic Aircraft Logbook (EAL) system is collected at the most appropriate point in each business process, by the "operator", and is accessible to all users in the form of reports, charts, and graphs through the Decision Support System (DSS) module in ALMIS. The EAL was developed as an application of the ALMIS project. The system was designed to replace the paper based reports, the paper based aircraft logbook, and the flight operations module of the Aviation Maintenance Management Information System (AMMIS).

Each air station is responsible for the timely and accurate entry of data into the ALMIS database. Furthermore, due to the sensitive and important nature of the information stored in the database, each unit must ensure security and limited access for the database. ALMIS access for unit personnel is determined by the unit and requested specifically by the person's supervisor. Access changes are submitted to ARSC customer support via the electronic access request form. Each air station must periodically review each members ALMIS roles and permissions to ensure that personnel have the appropriate level of access.

Section B. Logging of Flight Time

B.1. Overview

The following instructions pertain to recording and logging of flight time:

- Only pilots designated in type, or engaged in an authorized pilot training syllabus, may log pilot time in that type aircraft.
- Night and instrument time shall be logged simultaneously with FP or CP time. Flight time is automatically calculated from the takeoff and landing time inputs entered via the flight itinerary section of EAL's flight record.

For reference, flight time is calculated by the following method during contingency operations on Flight Record form CG-4377 parts II & III.

Flight time is calculated as total minutes and reported as hours and minutes rounded to the nearest tenth of an hour. Fractional hours are rounded to tenths by adding 3 minutes and then dividing by 6.

Example - When flight time = 128 minutes:
 The fractional hour is 8 minutes;
 Add 3 minutes, (8+3 = 11).
 Divide 11 by 6 = 1.
 Therefore total flight time is 2.1 hours.

Minutes to Tenths Time Conversion	
Minutes	Tenths
0-2	* 0
3-8	0.1
9-14	0.2
15-20	0.3
21-26	0.4
27-32	0.5
33-38	0.6
39-44	0.7
45-50	0.8
51-56	0.9
57-59	1.0
* In the first hour, flights of 2 minutes or less shall be logged as 0.1 hours	

Flight departure and arrival times are logged in Greenwich Mean Time (ZULU time).

See [Appendix H](#) of this manual for specific guidance on logging of flight time in the Aviator's Logbook.

Section C. Flight Pay Entitlement Requirements

C.1. Overview

The following paragraphs provide guidance for enlisted aviation unit flight pay management.

C.2. Applicable Directives

The following are applicable directives for aviation unit flight pay management:

- U. S. Coast Guard Pay Manual, COMDTINST M7220.29 (series)
- Management and Administration of Aviation Incentive Pays, COMDTINST 7220.39 (series)
- Personnel Manual, COMDTINST M1000.6 (series)
- Personnel Pay Procedures Manual, PPCINST M1000.2 (series)
- SDA User/Query Manual, PPCINST M5230.1 (series)
- Other directives promulgated by Commandant to govern the flight pay system

C.3. Administration

C.3.a. Instructions

Detailed instructions on issuance of flight orders and management and administration of aviation incentive pay are provided in applicable Coast Guard directives.

C.3.b. Syllabus Completion

A flight crew member may not be placed on flight orders, marking eligibility for flight pay, until at least the initial aircrew training syllabus ground portion is complete.

C.3.c. Tracking Flight Time

All members in flight pay status should track individual flight time. All members should keep personal logs of individual flight time, giving emphasis to tracking bank and grace periods.

C.3.d. Administrative Oversight

Oversight shall be conducted within EAL. Flight Pay Administration is located under the Administration tab of all EAL screens and can be accessed only by personnel having Flight Pay Administrator permission. Administration will include documenting the following information: flight pay start and end dates, flight pay type, injury date, recovery date, and suspension date. Additionally, several flight pay reports are available within the Decision Support System (DSS) to assist in determining the flight status of personnel and the audit and calculation of flight pay.

C.4. Training

Continued on next page

C.4.a. Flight Pay
Training

Units shall conduct periodic flight pay training for all personnel who currently or potentially could be on flight orders. Members should be provided detailed instructions concerning their responsibilities for maintaining a personal flight time log. In addition, they should be instructed to inform the unit flight pay system manager when the member believes he/she has been underpaid or overpaid Aviation Career Incentive Pay (ACIP)/Hazardous Duty Incentive Pay (HDIP).

C.4.b. Aircraft Flight
Record Preparation
Training

Units shall conduct periodic training for all pilots on preparation of both the EAL Flight Record and the paper logbook Flight Record form CG-4377, part II.

**C.5. Command
Responsibilities**

The command must:

- Be responsible for unit flight pay administration in accordance with applicable Coast Guard directives.
 - Advise all members on flight orders, in writing, when they are in a grace period, including the number of hours required to successfully complete the grace period without loss of pay.
 - Establish a unit flight pay audit team to conduct audits of flight pay records in accordance with the Management and Administration of Aviation Incentive Pay Instruction, COMDTINST 7220.39.
 - Assign one or more unit flight pay system managers, who will be trained to perform these duties.
-

Section D. Classification of Flights by Coast Guard Aircraft

D.1. Overview

Classification of flights by Coast Guard aircraft is for use in the preparation of the Abstract of Operations, COMDTINST 3123.7 (series) and to assist the Commandant in planning for the effective utilization of aircraft. All flights of Coast Guard aircraft shall be classified by employment categories. The number of missions, resource hours, and employment hours shall be recorded in each employment category. The appropriate code for each category corresponding to the sections of the Abstract of Operations shall be recorded on the EAL Aircraft Flight Record and other reports in which flight classifications are required.

Section E. Electronic Aircraft Logbook

E.1. Overview

The Aviation Logistics Management Information Systems (ALMIS) is the portal through which users can access the Aviation Maintenance Management Information System (AMMIS) and the Aviation Computerized Maintenance System (ACMS). Currently, all data related to flight operations and aircraft maintenance (except MPCs) are entered by individual users through the Electronic Aircraft Logbook (EAL) module of ALMIS. Each data entry is disseminated to the appropriate area(s) of both the AMMIS and ACMS systems. Additionally, data queries made from the Decision Support System (DSS) module of ALMIS will extract information directly from the appropriate area(s) within both the AMMIS and ACMS systems.

The traditional three-part Aircraft Flight Record form is now in electronic format. The EAL Preflight & Servicing Record, EAL Flight Record, and EAL Maintenance Record have replaced CG-4377, parts I, II, and III. For normal operations, EAL shall be used by all Coast Guard aviation units to record flight data. A paper version of EAL is available for contingency operations when system connectivity is limited, or physical or environmental conditions require operations where electronic management is neither feasible nor available.

The specific use of EAL contingency operations forms are addressed in COMDTINST 13020 (series) and PG-85-00-110, while specific EAL contingency operations instructions are addressed in MPC 00EAL. Assistance in using EAL may be found by utilizing the "Help" feature that is found on the top menu line of all EAL screens.

E.2. Instructions for Completing the Aircraft Flight Record

The Flight Schedule module provides the following functions for each flight/event:

- Access to the 'Preflight and Servicing Record'
- Access to the 'Flight Record'
- Access to the 'Maintenance Record'

E.2.a. Preflight and Servicing Record

The Preflight and Servicing Record is used to:

- Record preflight and servicing operations accomplished by maintenance personnel
- Verify any special equipment installed
- Record preflight and local clearance information entered by a pilot prior to flight

The EAL Preflight & Servicing Module provides authorized users on-line access to current and historic preflight and servicing records. The EAL version of the record has been designed with sections and entries that are specific to each aircraft type in the USCG inventory. The paper version of the Preflight Record Form CG-4377, part I is not aircraft specific.

Continued on next page.

Continued on next page

E.2.a.(1) Preflight and Servicing Record (continued)

The engineering section of the preflight and servicing record provides for maintenance personnel to:

- Enter the current fuel load
- Indicate special equipment installed
- Enter servicing data
- Enter preflight inspection information

Pilots access the preflight and servicing records by selecting the “Yellow Sheet” icon on the flight schedule. The PIC accepts the aircraft by signing the preflight and servicing record. Prior to completing a Preflight and Servicing Record, the PIC should ensure that all information for the scheduled event has been entered correctly.

The Preflight and Servicing module allows the pilot to enter the preflight data for a scheduled event, this includes:

- Pilot and crew roster
- Local clearance
- Passenger manifest
- Pilot’s preflight checklist
- Access to review preflight and servicing data for the assigned aircraft

Additionally, the preflight record provides the pilot with:

- A link to review aircraft maintenance records.
- The ability to record the number of maintenance records reviewed.
- Ability to electronically sign the preflight record. Once the record has been signed by the PIC, the “Yellow Sheet” icon will appear with a check mark over it.

E.2.b. EAL Aircraft Flight Record, or CG-4377, part II, “Blue Sheet”

The EAL Flight Record Module allows pilot access to complete the Flight Record, or “Blue Sheet”. EAL flight records will be completed for every Coast Guard flight. The “batching” of multiple flights (i.e., deployment, cross country) over a period of time on one Flight Record is not authorized. It is the PIC’s responsibility to ensure that all information recorded on the Flight Record is accurate and fully reflects the events of the flight. The Flight Record is the official USCG record of each flight of a USCG aircraft and is used for recording all operational information concerning the flight:

- The aircraft type and tail number
- Listing of pilots and crew, and all personnel logging individual flight time
- List dates and times for all takeoffs and landings that start or stop flight time; listed in ZULU time
- Point of origin, en route stops, and destination
- Total takeoffs and landings

Continued on next page.

Continued on next page

E.2.b.(1) EAL Aircraft Flight Record, or CG-4377, part II, "Blue Sheet" (continued)

- List approaches and landings
- Operations and training conducted
- Utilization and deployment information
- Names and status of all passengers
- Cargo and volume carried, if applicable
- A flight narrative
- Pilots signature

E.2.b.(2) Personnel

Flight crew members and non-crew members (AMS) on flight orders shall be listed in the "Pilots/Crew Roster" section within the Preflight and Service Record (CG-4377, part I). These personnel shall be listed by their names, crew position and the last four numbers of their Social Security Number (SSN). All other personnel onboard (e.g., non-aircrew members, non-mission essential personnel, orientation participants) shall be listed in the "Passenger Data" section and may not log flight time. If many passengers are transported, the PIC has the option of checking the "Paper Passenger Manifest" block and providing a hard copy of the passenger manifest for record in accordance with local procedures.

E.2.b.(3) Passengers

When transportation of passengers is involved, such reasons as official business, official transportation, etc., shall not be used, as they are insufficient to support the determination that aircraft are being used for official purposes.

E.2.b.(4) Guidelines

The following guidelines for completion of the flight record shall be followed:

- Utilization data and deployment data shall be completed in accordance with the current instructions for the Abstract of Operations, COMDTINST 3123.7 (series).
- Special care must be taken to ensure that employment category codes are selected which accurately reflect the mission area being supported by the flight. For example, transport of strike team personnel to an oil spill site should be coded Marine Environmental Protection, or transport of parts to repair a resource involved in a search and rescue case should be coded SAR Support.
- Deployment data consists of the number of Days Away from Home Station (DAHS), or the number of Days Deployed Aboard Ship (DDAS). The "From" ZULU date and time are entered on the first flight record of the deployment. The "Thru" ZULU date and time and the "Days Deployed Aboard Ship" figures are entered on the final flight record of the deployment.
- A deployment entry is required whenever an aircraft is away from home station for any period of time greater than 11.9 hours.
- When passenger transportation is the primary purpose of the flight, the cost comparison (if required) and further required approval documentation shall be attached to the flight/mission record in accordance with local procedures.

Continued on next page

E.2.c. Review of Flight Records by Operations Department:

A responsibility of the Flight Services Officer is to review the unit's Flight Records for completeness and accuracy. Flight Records should also be reviewed at least weekly.

The Commanding Officer should approve the Flight Records at least monthly. The Commanding Officer is the final approving authority for each flight record at his or her unit. At the beginning of each month, or more often, if desired, the Commanding Officer, as approving authority (or other personnel so designated), reviews the flight records for the previous month after which the flight records are locked by a Flight Record Approver. Once they are locked, flight records may only be unlocked by a Flight Record Approver at the unit.

E.2.d. Flight Generated Maintenance Record (Pilot Entries)

It is the PIC's responsibility to ensure that all information recorded on the Maintenance Record is accurate, and fully reflects the discrepancies that occur during the scheduled event. The Maintenance Record is the official USCG record of each discrepancy that occurs on a USCG aircraft.

All Flight Generated and No-Fly Maintenance Records will include the following entries as applicable:

- Engine starts and cycles.
- All discrepancies that occurred after the aircraft was signed for by the PIC. Discrepancies are not to be grouped together. When no discrepancies exist, enter "NONE" in the first discrepancy block.
- Aircraft Condition.

The EAL Maintenance Records Module provides authorized users on-line access to current and historical maintenance records. Each maintenance record has been designed with appropriate sections for each type aircraft in the USCG inventory.

Detailed instructions for completion of the Maintenance Records entered by engineering personnel are contained in:

- Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series)
 - EAL Help
-

E.2.e. Event Status:

All events must be assigned a status at the end of each 24-hour period. The following are acceptable event status outcomes:

- Success
- Cancel
- Delay
- Abort

Each status (except success) will also have a reason assigned to the outcome. Event status data are used to calculate the units' Dispatch Reliability Index (DRI).

Section F. Aviators Flight Logbook

F.1. Overview

Each Coast Guard aviator, student aviator, and other pilots assigned to a Coast Guard unit (e.g., exchange pilots) shall maintain a complete record in an Aviators Flight Logbook. The current logbook published by the U.S. Navy shall be used. The logbook is an official Government record.

All individual flight time in military aircraft shall be logged in this book. Individual flight time in other Government aircraft and in contractors' aircraft, when authorized by Commandant (CG-711), shall also be logged in this book. No other flight time shall be logged. Simulator time and simulator approaches shall be logged on separate pages from flight time in the Aviators Flight Logbook. Simulator time may be included in total accumulated flight time. Simulator time and approaches may be counted towards meeting semiannual minimums as provided for in [Chapter 8](#) of this manual.

The Decision Support System (DSS) within ALMIS can be utilized to determine specific Flight Logbook entry information. The data contained within the electronic logbooks by no means will alleviate the need for each pilot to maintain the Aviators Flight Logbook.

The following reports are available within DSS to assist in maintaining the currency of your logbook.

Web Reports	PowerPlay Cubes
Pilot Experience Summary Report	Pilot Logbook (Abbreviated)
Pilot Flight Logbook	Pilot Logbook (Averages)
Pilot Simulator Logbook	Pilot Logbook (Approaches)
	Pilot Logbook (Landings)
	Pilot Logbook (Operations)
	Pilot Logbook for Pilot Time

See Chapter 8, paragraph A.9.b, for other logbook entries. See [Appendix H](#) for guidance on filling out the Aviators Flight Logbook.

F.2. Flight Logbook Repository

Current flight logbooks shall not be carried in the aircraft, but shall be kept in a common repository within an area under the cognizance of the unit operations officer.

F.3. Ownership of Flight Logbook

Flight logbooks become the personal property of the individual upon separation from the Coast Guard. Flight logbooks of deceased personnel shall be handled in accordance with instructions governing disposition of Coast Guard records.

Continued on next page

F.4. Violation/Mishap Entries

F.4.a. Purpose

Entries in the Pilots Accident and Violation Record are not to be considered punitive. This record merely furnishes commanding officers with information concerning an individual pilot's mishap record or violations of flying regulations. No administrative action may be taken based on the findings contained in a Safety/Mishap Investigation. Commands contemplating administrative logbook entries should conduct an Administrative Investigation.

F.4.b. Inserted Information

The information to be inserted in the Pilot's Accident and Violation Record shall be specified by Commandant (CG-711).

F.5. Review/Approval

The commanding officer (or his/her designate) shall review, approve the flight time record, and sign the Accident and Flight Violation Record of an Aviators Flight Logbook in the following circumstances:

- Upon PCS of the aviator
- Upon PCS of the commanding officer
- Upon insertion of an entry in the pilot's Accident and Flight Violation Record
- At the end of each semiannual period

Negative entries are required.

Section G. Change of Pilot Designation and Qualification

G.1. Overview

Units shall report changes to pilot designations and ship-helicopter qualifications in accordance with the provisions of the Coast Guard Human Resource Management System (CGHRMS).

Section H. Miscellaneous Records and Reports

H.1. Aviation Mishap Reports

H.1.a. Safety Analysis

Aircraft accidents, incidents, and ground accidents shall be reported in accordance with the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

H.1.b. Legal Investigation

Investigations of aircraft incidents and ground accidents shall be conducted in accordance with Military Justice Manual, COMDTINST M5810.1 (series).

H.2. Reporting Actual or Near Midair Collisions

A midair collision is an incident where two or more aircraft actually collide.

A near midair collision is an incident where a possibility of collision occurs as a result of proximity of less than 500 feet to another aircraft (excluding normal formation or air intercept flight), or a report is received from a pilot or a flight crew member stating that a collision hazard existed between two or more aircraft. A serious near midair collision is an incident where a possibility of a collision occurs, and evasive action and/or bodily injury occurs as a result.

H.2.a. Statements

Statements which might indicate responsibility for a midair collision or near midair collision shall not be made before completion of the investigation. Voluntary statements to the press are not encouraged. If any statement is given to the press, it shall be limited to the known facts concerning the incident.

H.2.b. Voice Report

A pilot experiencing a near, serious near, or actual midair collision shall make an immediate voice report to the nearest FAA communications facility. Items to be reported are:

- Date and Time (UTC) of incident
 - Location of incident and altitude
 - Identification and type of reporting aircraft, aircrew destination, name and home base of pilot
 - Identification and type of other aircraft, aircrew destination, name and home base of pilot
-

Continued on next page

H.2.c. Reporting
Responsibility to the
FAA

The following information shall be reported to the FAA for all actual and near midair collisions:

- Type of flight plan
- Station altimeter setting used
- Detailed weather conditions at altitude or flight level
- Approximate courses of both aircraft, indicating if one or both aircraft were climbing or descending
- Reported separation in distance at first sighting, proximity at closest point horizontally and vertically, and length of time in sight prior to evasive action
- Degree of evasive action taken, if any (from both aircraft, if possible)
- Injuries, if any

Safeguarding of the Voice/Flight Data Recorder information upon landing for subsequent investigation may be warranted.

H.2.d. Reporting
Responsibility to the
Coast Guard

In addition, the following guidance applies:

H.2.d.(1) Midair
Collisions

Regardless of the amount of damage, midair collisions shall be immediately reported to Commandant (CG-1131) or Office of Current Operations (CG-311) via telephone through the chain of command. A preliminary message of report shall be submitted within 12 hours of the incident, using the guidelines in the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

H.2.d.(2) Near Midair
Collisions

Near midair collisions shall be treated as an aviation flight related Class D Mishap for safety reporting requirements.

H.2.d.(3) Serious Near
Midair Collisions

Make a report of details, as soon as practicable, to Commandant (CG-711) or Office of Current Operations (CG-311) via telephone through the chain of command, followed by an aviation flight-related Class D Mishap report per safety reporting requirements. Serious near midair collisions shall be treated as an aviation flight related Class D Mishap for Safety reporting requirements.

H.2.d.(4) NTSB
Involvement

Commandant (CG-1131) will request NTSB participation in all investigations of actual midair collisions between Coast Guard and non-Coast Guard aircraft.

**H.3. Report
of Aviators
Failing to Meet
Flight Minimums
or Instrument
Qualification
Requirements**

Commanding officers of aviation units shall submit reports of aviators failing to meet flight minimums or instrument qualification requirements as prescribed in [Chapter 8](#) of this manual.

Continued on next page

H.4. Check Flight and Qualifications Records

Unit Flight Examining Boards shall maintain records of all check flights administered and qualifications issued or renewed.

H.5. Aircrew Training Records

Aircrew training records shall be maintained as prescribed in [Chapter 8](#) of this manual.

H.6. Senior Federal Travel Report

Commanding officers of aviation units shall submit the report as prescribed in Chapter 5, section F, of this manual.

H.7. Shots Fired from Coast Guard Aircraft Report

Commanding officers of aviation units shall submit the reports as prescribed in Chapter 4, section Q, of this manual.

H.8. Marine Information for Safety and Law Enforcement (MISLE)

Law Enforcement sighting reports shall be reported in accordance with the Maritime Law Enforcement Manual, COMDTINST M16247.1 (series).

GLOSSARY

AC	Aircraft Commander
ACIP	Aviation Career Incentive Pay
Actual Cost	All costs associated with the use and operation of a DHS or other Government aircraft, in accordance with Attachment A of OMB Circular A-126.
Actual Instrument Conditions	Conditions external to the aircraft, which require the pilot to control the attitude of the aircraft primarily through reference to flight instruments. Time is credited to all pilots at flight control positions, but only the pilot logging first pilot time during an approach may be credited with that approach.
ADC	Aircrew Dry Coverall
Adequate Crew Rest Facilities	At a minimum, adequate crew rest facilities consist of an enclosed building, sheltering the crew from the elements, capable of maintaining a comfortable temperature/humidity environment, equipped with comfortable furniture, food/storage preparation capability, head facilities, water supply, lighting, and providing a comfortable noise level. NOTE: Adequate crew rest facilities for crews on alert duty for more than 12 consecutive hours must provide suitable sleeping quarters.
ADF	Automatic Direction Finder
ADIZ	Air Defense Identification Zone
ADS	Air Drop System
ADSK	Air Delivery Survival Kit
Aerial Port of Debarkation (APOD)	The destination of an overseas airlift mission.
Aerial Port of Embarkation (APOE)	The origin of an overseas airlift mission.
Aeromedical Space Available Patients	Patients evaluated by competent medical authority and referred to another medical facility due to inadequate medical care in the local area, and whose travel would not otherwise be funded by the Coast Guard. This category is separate from that of the Military Space Available Travel Program.
AET	Aviation Electronics Technician
AFMAN	Air Force Inter-service Manual
AGL	Above Ground Level
AI	Air Intercept or Aircrew Instructor
AIM	Aeronautical Information Manual
Aircraft	A device that is used or intended to be used for flight in the air (i.e., helicopters, airplanes, unmanned aircraft, airships and lighter than air vehicles).
Aircraft (DHS)	Any aircraft owned, leased, chartered or rented and operated, or a commercial aircraft hired as commercial aviation services (CAS), by an Organizational Element of the Department of Homeland Security. All Coast Guard aircraft are DHS aircraft.
Aircraft Category	A broad classification of aircraft (i.e., fixed wing or rotary wing).
Aircraft Commander (AC)	A pilot who has completed more training and flight hours than a First Pilot (FP). Always eligible to be assigned as Pilot in Command (PIC).

Aircraft Operating Hours	Operating hours begin when an aircraft departs its unit on a specific sortie and ends when the aircraft returns to that unit. Normally, all time spent away from an assigned unit except maintenance and storage time will be included.
Aircraft Time	All time officially creditable to an individual aircraft. Aircraft time begins when the aircraft first moves forward on its takeoff run or when it takes off from its point of support. Aircraft time ends when the aircraft comes to a stop after airborne flight with all engines shut down. If the engines are kept running for maintenance tests, or any other purposes and no further flight is intended, aircraft time shall end when the aircraft is stopped for such purpose. Aircraft time ends when a change is made to the pilot in command.
Aircrew	See definition of Flight Crew Member.
Air Defense Identification Zone (ADIZ)	The area of airspace over land or water, extending upward from the surface, within which the ready identification, the location, and the control of aircraft are required in the interest of national security.
Airplane	An engine driven, fixed wing aircraft, heavier than air, that is supported in-flight by the dynamic reaction of air against its wings.
Air Traffic	Aircraft operating in the air or on the airport surface, exclusive of loading ramps and parking areas.
Air Traffic Control (ATC)	A service operated by the appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
Alert Duty	A person is on alert duty when in a ready status to proceed on a mission as soon as the need becomes known. Applies to BRAVO ZERO or STRIP ALERT status.
ALMIS	Aviation Logistics Management Information System
ALPHA Status	See Operating Status
AMC	■ Air Mission Commander
AMC	Air Mobility Command (USAF)
AMIO	Alien Migrant Interdiction Operations
AMMIS	Aviation Maintenance Management Information System
AMS	■ Aviation Mission Specialist
AMT	Aviation Maintenance Technician
Annual Requirement	A training evolution that must be completed no more than 12 months after the previous completion of the same evolution.
AO	Area of Operations
AOR	Area of Responsibility
APOD	Aerial Port of Debarkation
APOE	Aerial Port of Embarkation
ARSC	Aircraft Repair and Supply Center, Elizabeth City, NC
Area Navigation (RNAV)	A method of navigation that permits aircraft operations on any desired course within the limits of self contained system capability.
Armed Forces Reserve Personnel	Includes personnel of the U.S. Coast Guard, Army, Navy, Marine Corps, and Air Force Reserves.
ASM	■ Aviation Special Missions

AST	Aviation Survival Technician
ATC	Air Traffic Control or Aviation Training Center, Mobile, AL
ATON	Aids to Navigation
ATTC	Aviation Technical Training Center, Elizabeth City, NC
AUF	Airborne Use of Force
Autorotation	A rotary wing aircraft flight condition in which the lifting rotor is driven entirely by action of the air when the rotary wing aircraft is in motion.
AV	Avionicsman
AWL	Above Water Level
BA	Basic Aircrew Member
BRAVO Status	See Readiness Status
BVI	Basic Vertical Insertion
C2	Command and Control
C3I	Command, Control, Communications and Intelligence
Calendar Year Requirement	A training evolution which must be completed no less than once per year, from 1 January to 31 December.
Calibrated Airspeed	The indicated airspeed of an aircraft, corrected for position and instrument error. Calibrated airspeed is equal to true airspeed in standard atmosphere at sea level.
CAP	Civil Air Patrol
CASB	Commandant's Aviation Safety Board
CASPER Sensor	Use of aircraft sensor electro-optical and/or infrared (EO/IR) systems by qualified operator.
CASPER Tactical	Use of CASPER sensor equipment combined with operation of tactical work station via satellite communications capability to provide data link of information to a command center or other supported unit.
CATCH	Computer Approach to Coupled Hover
CATP	Cadet Aviation Training Program
CBRN	Chemical, Biological, Nuclear, Radiological
CFIT	Controlled Flight into Terrain
CGAS	Coast Guard Air Station
CGHRMS	Coast Guard Human Resource Management System
CGQC	Coast Guard Qualification Code
CGTO	Coast Guard Technical Order
CHARLIE Status	See Maintenance Status.
CISD	Critical Incident Stress Debriefing
Clearance	Permission to execute a definite aircraft movement.
CMC	Command Master Chief
CMH	Crew Mission Hours

CMP	Contract Maintenance Pilot
CO	Commanding Officer
Coast Guard Aircraft	Any aircraft owned, leased, chartered or rented and operated, or a commercial aircraft hired as commercial aviation services (CAS), by the Coast Guard.
Cocked	An aircraft in a BRAVO ZERO (B-0) readiness status is said to have been “cocked” when the pre-engine start portion of an approved rapid response checklist has been completed but takeoff is not necessarily imminent. This is done to minimize launch time. (See also “Strip Alert.”)
Command Center	Coast Guard district center which is responsible for coordinating all activities within the AOR. Has responsibility for prioritizing and authorizing operations of district assets. Formally known as RCCs or OPCENs.
COMMSTA	Coast Guard High Frequency Radio Communications Station
Competent Medical Authority	A military, civilian, or contract physician of the U.S. Coast Guard, Department of Defense, U.S. Public Health Service, or Department of Veterans Affairs.
Confined Areas	An area that contains objects or obstacles that may be a strike hazard within one wingspan or rotor disk diameter in any direction and along the path of an aircraft.
Controlled Airspace	An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification.
CONUS	Continental United States
Copilot	A pilot who has completed the initial training and flight hours necessary to fly. Not yet eligible to be assigned as Pilot in Command (PIC).
Copilot Time	That time a pilot spends at a flight control position of multi-piloted aircraft but is not the pilot operating the flight controls. For any flight, the total copilot time credited to pilots shall not exceed the aircraft time.
COTP	Captain of the Port
CP	Copilot
Crash Equipment	Aircraft fire fighting and rescue equipment appropriate for the aircraft being protected as specified by COMDTINST M5100.47 (series).
Crew Mission Time	Commences with the start of preflight duties and ends with the completion of postflight duties for each sortie. Crew mission time for multiple sorties is cumulative unless 10 hours of rest occurs between sorties. If adequate crew rest facilities are not available between multiple sorties, crew mission time shall continue to accrue.
Critical Engine	The engine whose failure would most adversely affect the performance or handling qualities of an aircraft.
CRM	Crew Resource Management
CSAR	Combat Search And Rescue
DAHS	Days Away from Home Station
DCA	Direct Commission Aviator
DDAS	Days Deployed Aboard Ship
DDS	Decision Support System

Deadheading	An aircrew member being transported to or from a staging area. One half of the number of flight hours spent deadheading shall count as crew mission time. Deadheading time shall not count as part of an off duty period.
Decision Height	The height at which a decision must be made, during an ILS or a PAR instrument approach, to either continue the approach or to execute a missed approach.
Designation	A crew member's qualification in aircraft type (e.g., Flight Mechanic in the H-60, First Pilot in the C-130, etc.).
DIFDEN	Duty Involving Flying - Denied
DIFOPS	Duty Involving Flying - Operations
DIFPRO	Duty Involving Flying - Proficiency
Dispersants	Substances used to remove oil from the surface of water, distributing it as small droplets into the water column where it is rapidly diluted by currents and converted into harmless products by natural biodegradation processes.
DIW	Dead in the Water (i.e., a vessel without power)
DM	Designated Marksman
DMB	Datum Marker Buoy
DME	Distance Measuring Equipment
DOD	Department of Defense
DOT	Department of Transportation
DRI	Dispatch Reliability Index
Duty	Signifies a person who is engaged in the performance of any official Coast Guard business, whether ground or flight. This includes time subject to immediate recall for aircrew or other assignment.
EAL	Electronic Aircraft Logbook
Egress Breathing Device	Any underwater breathing device designed and authorized for aircraft egress.
ELT	Emergency Locator Transmitter or Enforcement of Laws and Treaties
EML	Environmental and Morale Leave
Employment Hours	The flight hours which are expended while benefiting a particular mission area.
Endurance	An aircraft's ability to remain aloft for a period of time, limited by the amount of fuel an aircraft carries, the rate at which the fuel is burned, and by the requirement to maintain an adequate fuel reserve for landing.
EPIRB	Emergency Position Indicating Radio Beacon
EPOS	Emergency Passenger Oxygen System
ERD	Emergency Recovery Device
ESCAT	Emergency Security Control of Air Traffic
External Load	A load that is carried, or extends, outside of the aircraft fuselage.
F/W	Fixed Wing
FAA	Federal Aviation Administration

Familiarization Flights	See "Orientation Flights".
FAR	Federal Aviation Regulations
FE	Flight Engineer
FEB	Flight Examining Board
Ferry Flight	A flight from the original point of departure to the movement destination for the exclusive purpose of transferring the aircraft between two locations.
Ferry Pilot	A Coast Guard aviator designated as Pilot in Command (PIC) of a ferry flight.
First Pilot (FP)	A pilot who has completed more training and flight hours than a Copilot (CP). First Pilots are eligible to be assigned as Pilots in Command (PICs) on most, but not all, flights.
First Pilot Time	That time actually spent operating the aircraft flight controls. When two pilots are at flight control positions, credit for first pilot time is given to whichever pilot is operating the flight controls. For any flight, the total first pilot time credited to pilots must equal the aircraft time.
FL	Flight Level (in hundreds of feet; e.g., FL 180' = 18,000 feet.)
Flight Crew Member	Any aviator or aviation rated person assigned to operate or assist in operating an aircraft, either designated or in training to be designated, who is performing in-flight duties relating to the operation of the aircraft (e.g., pilots, copilots, flight engineers, navigators, crew chiefs, sensor operators, and UAS pilot/sensor operators).
Flight Examiner	An instructor who has been designated, in writing, by the commanding officer to conduct ground and flight checks.
Flight Information Publication (FLIP)	Military publication that provides information on aeronautical procedures and airport facilities.
Flight Level	A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represents hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet; flight level 255, an indication of 25,500 feet.
Flight Time	Flight Time is all time officially creditable to an aircraft flight crew.
Flight Verification Check	An airborne functional check of components or systems whose failure would not adversely affect flight safety or seriously affect mission accomplishment.
Flight Visibility	The average forward horizontal distance, from the cockpit of an aircraft in-flight, at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.
FLIP	Flight Information Publication
FLIR	Forward Looking Infrared
FM	Flight Mechanic or Frequency Modulation
FOD	Foreign Object Debris
FP	First Pilot
FS	Flight Surgeon
FSB	Flight Standards Board
FSO	Flight Safety Officer or Flight Services Officer

Full Coach Fare	The price of a coach fare available to the general public on a scheduled air carrier between the day that the travel was planned and the day the travel occurred.
GCA	Ground Controlled Approach
Government Aircraft	Any aircraft owned, leased, chartered, rented or a commercial aircraft hired as commercial aviation services (CAS), and operated by an Executive Agency.
GP	General Planning (as used in FLIPs)
GPS	Global Positioning System
Ground Visibility	The prevailing horizontal visibility near the earth's surface as reported by the United States National Weather Service or an accredited observer.
GSO	Ground Safety Officer
HALE UAS	High Altitude Long Endurance Unmanned Aircraft System
Hazardous Duty Incentive Pay	(HDIP) Hazardous duty incentive pay is paid to flight crew and non-crew members and is administered in accordance with the Management and Administration of Aviation Incentive Pay Instruction, COMDTINST 7220.39.
HDIP	Hazardous Duty Incentive Pay
Helicopter	A rotary wing aircraft that, for its horizontal motion, depends principally on its engine driven rotors.
HF	High Frequency Radio Waves
HIFR	Helicopter In-flight Refueling
HIRL	High Intensity Runway Light System
HITRON	Helicopter Interdiction Squadron
Hot Refueling	Refueling an aircraft with the engine(s) and/or the auxiliary power unit operating.
HQBA	Hoist Qualified Basic Aircrew Member
IAP	Instrument Approach Procedures
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organization
ICS	Intercommunication System
ID	Identification
IFF	Identification, Friend or Foe
IFR	Instrument Flight Rules
IFT	Individual Flight Time
IIP	International Ice Patrol
ILS	Instrument Landing System
Indicated Airspeed	The speed of an aircraft as shown on its pitot static airspeed indicator uncorrected for airspeed system errors.

Individual Flight Time	Individual flight time comprises all time officially creditable to individual flight crew members, technical observers, and other mission essential non-crew member personnel on flight orders. Individual flight time for a given flight shall be the amount of time the individual was aboard an aircraft, participating in the flight as an integral flight crew member, technical observer or other mission essential personnel for the assigned mission, while that aircraft was accumulating aircraft time on that flight. All other personnel not so actively engaged (e.g., passengers for transportation or orientation) are prohibited from logging individual flight time. Individual flight time may include time spent performing activities while outside the aircraft by a member of that aircraft's assigned flight crew, and which are in direct support of that aircraft's mission for that flight (e.g., rescue swimmer). An individual's flight time accumulation shall cease if the crew member is left behind when the aircraft departs scene, and will commence again when the crew member becomes involved as an integral flight crew member with another aircraft.
INS	Inertial Navigation System
Instructor Pilot	A pilot who has been designated, in writing, by the commanding officer to conduct ground and flight syllabus instruction.
Instructor Pilot Time	That time actually spent exercising control over a flight in which syllabus instruction or a flight check is given. Training given during normal operational flights is not instructor pilot time.
Instrument Flight Rules (IFR)	Set of procedures that must be followed when flying in Instrument Meteorological Conditions (IMC).
Instrument Meteorological Conditions (IMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions.
Instrument Time	That time a pilot occupies a flight control position while under actual instrument conditions or simulated instrument conditions, regardless of whether day or night. Flying "on top" shall not be credited as instrument time unless conditions actually require reliance on instruments.
IP	Instructor Pilot
IR/UV	Infrared and Ultraviolet
ISAR	Inverse Synthetic Aperture Radar
ITO	Invitational Travel Orders
JCS	Joint Chiefs of Staff
JFACC	Joint Force Air Component Commander
JFC	Joint Force Commander
JFMCC	Joint Force Maritime Component Commander
KIAS	Indicated Airspeed expressed in Knots
KTAS	True Airspeed expressed in Knots
Large Aircraft	Aircraft of more than 12,500 pounds maximum certificated weight.
LE	Law Enforcement
LM	Loadmaster
LOM	Compass Locator at the Outer Marker of the ILS
LORAN	Long Range Aids to Navigation

LPC	Low Pressure Chamber
LRS	Long Range Surveillance
M	Airspeed expressed in Mach number
MAA	Maximum Authorized IFR Altitude or Master At Arms
MAB	Mishap Analysis Board
Mach Number	The ratio of true airspeed to the speed of sound.
Main Rotor	The rotor that supplies the principal lift to a rotary wing aircraft.
Maintenance Status (Code Title: CHARLIE)	Signifies aircraft that are inoperable because of required maintenance. This maintenance cannot be done as part of the normal preflight or postflight inspections, or in an amount of time that would not delay a BRAVO ZERO aircraft departure. The degree of Maintenance Status shall be assigned on the basis of total time estimated for repairs or to perform such work required to prepare the aircraft for Readiness Status, and will be stated using an RFB (Ready for BRAVO) date-time group (e.g., CHARLIE RFB 031200Z or 031200 (local)).
MALE UAS	Medium Altitude Long Endurance Unmanned Aircraft System
MALS	Medium Intensity Approach Light System
MALSR	Medium Intensity Approach Light System with runway alignment light indicator lights
MATCH	Manual Approach To Controlled Hover
MCA	Minimum Crossing Altitude
MDA	Minimum Descent Altitude
MDA/DH	Minimum Descent Altitude/Decision Height
MEA	Minimum En route Altitude
MEDEVAC	Medical Evacuation
MEP	Marine Environmental Protection
MHz	Megahertz
Military Space Available Travel	Travel on Coast Guard aircraft for the secondary purpose of transportation which is extended to specified categories of personnel between specified locations in seats not required for aircraft Mission Requirements Use personnel, Required Use passengers, or other official passengers.
Minimum Descent Altitude	The lowest altitude expressed in feet above sea level, to which descent is authorized on final approach or during circling to land maneuvering when executing a standard instrument approach procedure where no electronic glide slope is provided.
MIO	Marine Inspection Office
Mission Essential Personnel	A person, approved by the air station Commanding Officer, being transported on DHS or Coast Guard aircraft whose skills or expertise are required to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission, or function for which the aircraft is being operated (e.g., law enforcement personnel being transported to the location of a drug case, marine inspectors being transported to inspect offshore facilities, ATON personnel being transported to repair a light structure, rescue or disaster victims, MEDEVAC patients, or search teams). Mission essential personnel are not passengers.

Mission Expert	Any person with specific expertise related to an aspect of a mission undertaken by Coast Guard aviation whose participation can increase safety or operational effectiveness. Mission experts are considered mission essential personnel for non-routine missions.
Mission Requirements Use	Activities that constitute the discharge of DHS or the Coast Guard's official responsibilities, which may include authorized assistance to other government agencies. Mission Requirements Use include, but are not limited to, the transport of troops and/or equipment, training, evacuation (including medical evacuation), intelligence activities, law enforcement (including transport of prisoners, detainees, and illegal aliens) and search and rescue. Travel aboard DHS aircraft for purposes of attending meetings, site visits, conferences, or making speeches are examples of travel that are not Mission Requirements Use.
MM	ILS Middle Marker
MOCA	Minimum Obstacle Clearance Altitude
Model	A specific version of an aircraft type (e.g., C-130H, H-60J).
Monthly Requirement	A training sequence that must be completed once in each calendar month (e.g., a sequence that was completed on 1 July must be repeated by 31 August).
MPC	Maintenance Procedure Card
MRA	Minimum Reception Altitude
MRR	Medium Range Recovery
MRS	Medium Range Surveillance
MSL	Mean Sea Level
MSO	Marine Safety Office
MTI	Moving Target Indicator
MVA	Minimum Vectoring Altitude
N	Navigator
National Capital Region	Consists of the District of Columbia; Montgomery, Prince George's, and Frederick Counties in Maryland; Arlington, Fairfax, Loudon, and Prince William Counties in Virginia; and cities now or hereafter existing in Maryland or Virginia within the geographic area bounded by the outer boundaries of the combined area of the counties listed above.
NDB	Nondirectional Beacon
Night Adapted	A flight crew member that has been placed in a night orientation for four or more nights. The flight crew member must be afforded adequate crew rest facilities allowing 10 uninterrupted hours of daytime rest. Based on a shift of the body's internal clock per 24-hour period, the member should be adapted for continuous reverse cycle operations by night four and following. See Appendix D for further guidance on night adaptation strategies.
Night Time	The time a pilot occupies a flight control position in-flight between the official time of sunset and sunrise (on the surface below the aircraft) regardless of whether visual or instrument conditions.
Night Vision Goggle (NVG) Time	That time when a pilot occupies a flight control position in-flight between official sunset and official sunrise (on the surface below the aircraft) and is using NVGs.

NLW	Non-Lethal Weapons
NMC	Not Mission Capable
NMCB	Not Mission Capable - Both
NMCM	Not Mission Capable - Maintenance
NMCS	Not Mission Capable - Supply (i.e., waiting for parts)
Non-Crew Member	An officer or enlisted member, other than a crew member, who is physically qualified for flying duty in accordance with the Medical Manual and who is ordered to duty involving flying to perform in-flight a function for which qualified and which directly contributes to an essential element of the aircraft's flying mission and can not be performed by the aircraft's assigned crew members.
Non-Federal Traveler	Any person who is a civilian, not the spouse or a dependent of a member of the armed forces, and not otherwise in an official travel status (i.e., a civilian who has been issued an invitational travel order is in an official travel status, and is not considered a Non-Federal traveler for air transportation purposes).
Nonofficial Passenger/Traveler	Any person for whom the Federal Government is not authorized to pay or reimburse transportation or other travel expenses for a particular trip.
Non-Precision Approach Procedure	A standard instrument approach procedure in which no electronic glide slope is provided.
Not Mission Capable (NMC)	When the aircraft is unable to operate due to: (1) maintenance work that was necessary but could not be performed due to unavailable supplies (NMCS); (2) maintenance work that had to be performed with supplies available (NMCM); or (3) both (NMCB).
NTSB	National Transportation Safety Board
NVD	Night Vision Device
NVG	Night Vision Goggles
OCONUS	Outside Continental United States
ODO	Operations Duty Officer
Official Purpose	Activity to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission, or function.
Official Transportation	Authorized movement of persons in an official travel status on DHS aircraft. Such transportation includes movement to meet Mission Requirements Use, Required Use, and other requirements to carry out an authorized DHS or Coast Guard responsibility, mission or function.
Official Travel	Approved travel that is paid for, or reimbursed, by the Federal Government, to carry out or contribute to any authorized DHS or Coast Guard responsibility, mission, or function. This definition includes, but is not limited to: active duty Uniformed Services personnel, Federal employees on official business (including those from other agencies on official Federal Government business), Reserve/National Guard members when in a duty status on official orders, and regular members of the Coast Guard Auxiliary in performance of Auxiliary activities (see CG Auxiliary Manual, COMDTINST M16790.1 (series)).
OM	ILS Outer Marker
OPAREA	Operating Area
OPBAT	Operation Bahamas and Turks and Caicos

OPCEN	Operations Center
OPCON	Operational Control
Operating Status (Code Title: ALPHA)	Status achieved when aircraft is performing a specific mission or task (e.g., an aircraft engaged in a specific search and rescue, law enforcement, administrative, patrol, training, test, ferry, logistics, or other operation). Aircraft temporarily deployed from their assigned station to another unit for other than SAR readiness or for duty under Navy operational control are in ALPHA status.
Orientation Flights	Flights intended to afford firsthand opportunities to observe the missions of Coast Guard aviation, secondary to an assigned primary purpose of the flight and not used for point-to-point transportation.
OSC	On Scene Coordinator
Other Transportation For the Conduct of DOT/Coast Guard Official Business	Transportation on Coast Guard aircraft that may be approved only if such use is cost effective, or if no commercial airline or aircraft service, including charter, is reasonably available to effectively fulfill the traveler's requirement.
Overseas	Any country or place beyond the contiguous 48 states of the continental United States (CONUS) is overseas for travel and transportation purposes.
P	Pilot
PAR	Precision Approach Radar
Passenger	Any person transported on a DHS or Coast Guard aircraft other than the flight crew members and mission essential personnel.
PATCH	Precision Approach to a Coupled Hover
PCS	Permanent Change of Station
PDS	Primary Duty Station
PED	Personal Electronic Device
PFD	Personal Flotation Device
PIC	Pilot In Command
Pilot in Command (PIC)	The pilot who has been assigned by proper authority to take charge of the aircraft and be responsible for a specific flight or mission. Normally, the PIC is the senior pilot in the aircraft holding the highest designation in type. In the case of UASs the PIC shall be the senior designated pilot controlling the aircraft.
Positive Control	Control of all air traffic, within designated airspace, by air traffic control.
Precision Approach Procedure	Procedure in which an electronic glide slope is provided, such as ILS or PAR.
Program Hours	Number of hours per year assigned to a particular type of aircraft based on budget considerations for operation and maintenance costs.
Prohibited Area	Designated airspace within which the flight of aircraft is prohibited.
PROS	Palletized Radar Operator's Station
Public Aircraft	Aircraft used only in the service of a government or political subdivision, not including government-owned aircraft carrying persons or property for commercial purposes.

PUI	Pilot Under Instruction
PWCS	Ports Waterways Coastal Security
R	Radio Operator
R/T	Receiver/Transmitter
R/W	Rotary Wing
RADAR	Radio Detection and Ranging
Range	The maximum distance that can be covered on a single flight sortie.
RCC	Rescue Coordination Center
Readiness Requirements	The degree of readiness required of an air unit; prescribed by the operational commander.
Readiness Status (Code Title: BRAVO)	Signifies aircraft in potential working status when not in Operating Status or Maintenance Status. An aircraft in Readiness Status shall be ready to proceed within a status period after receipt of orders or information requiring its movement. BRAVO ZERO shall be construed to mean that facilities (material and personnel) are ready to proceed with a minimum of delay. The crew of an aircraft in BRAVO ZERO status need not be kept in the immediate vicinity of the aircraft. The crew shall be readily available so that the aircraft can proceed within 30 minutes from the time of notice. Similarly, the crew of a BRAVO 'X' aircraft must be able to proceed within 'X' hours. The degree of Readiness Status shall be assigned solely on the basis of personnel availability and not for material or maintenance purposes.
Ready For BRAVO (RFB)	An indication of the degree of Maintenance Status, which is assigned on the basis of total time, estimated for repairs or to perform such work required to prepare the aircraft for Readiness Status. The date and time when the repairs will be completed is part of this designation.
Reasonably Available	Commercial airline or aircraft (including charter) available to meet the traveler's departure and arrival requirements within a 24-hour period unless the traveler demonstrates in writing that extraordinary circumstances require a shorter period.
Recovered Patient	An individual discharged from treatment by a competent medical authority and who is physically able to travel unattended.
REIL	Runway End Identification Lights
Remote Locations	Geographic locations not reasonably accessible to regularly scheduled commercial airline service, specified by area/district commanders.
Reporting Custodian	The unit assigned physical custody of aircraft to be used in performing that unit's mission.
Required Use Transportation	Use of a Coast Guard aircraft for the transportation of a DHS or Coast Guard officer or employee where use of the aircraft is required because of predetermined, bona fide communications or security needs of the traveler's organization, or exceptional scheduling requirements.
Resource Hours	Hours accumulated by an aircraft when operating. See the Abstract of Operations Reports, COMDTINST M3123.7 (series).
Restricted Area	Designated airspace within which the flight of aircraft, while not wholly prohibited, is subject to restriction.

Reverse Cycle Operations	Repeated nights of scheduled sorties or unscheduled flight operations of the same flight crew member requiring crew mission time from 0000 to sunrise (0600 rather than sunrise for extreme latitudes). See Appendix D for further planning and scheduling guidance for reverse cycle operations.
RFB	Ready For BRAVO
RNAV	Area Navigation
RON	Remain Overnight
Rotary Wing Aircraft	A heavier-than-air aircraft that principally depends on the lift generated by one or more rotors for its support in-flight.
Rotary Wing Air Intercept (RWAI)	Actions of specially trained and authorized Coast Guard rotary wing aircraft and crews, to visually detect and close with other aircraft (fixed wing, helicopters, etc.) to identify, communicate, determine intent and compel compliance with airspace restrictions.
Rotary Wing Air Intercept (RWAI) Alert	A special type of readiness status in which ready crews are capable of achieving takeoff within a launch window specified by TACON.
RS	Rescue Swimmer
RVR	Runway Visual Range
RSVM	Reduced Vertical Separation Minimum
RWAI	Rotary Wing Air Intercept
SAR	Search and Rescue
SAREX	Search and Rescue Exercise
SARFND	Search and Rescue Fundamentals Course
SCUBA	Self-Contained Underwater Breathing Apparatus
SDAP	Special Duty Assignment Pay
SDO	Senior Duty Officer
SE	Single Engine
Second in Command	A pilot designated to be second in command of an aircraft during flight.
Semiannual Periods	Six-month periods beginning on the first of January and the first of July of each calendar year.
Semiannual Requirement	A training sequence or group of sequences that must be completed during each semiannual period.
Senior Executive Branch Officials (SEBO)	Civilian officials appointed by the President with the advice and consent of the Senate, and civilian employees of the Executive Office of the President (EOP).
Senior Federal Officials (SFO)	DHS or Coast Guard and other Federal employees having a rate of pay equal to or greater than the minimum rate of basic pay for the Senior Executive Service (SES). Coast Guard officers serving in the pay grades of O-9 and O-10 are included in this definition.
Simulated Instrument Conditions	Conditions external to the aircraft are visual, but the pilot flies the aircraft solely by reference to instruments. Time and approaches are credited only to the pilot logging first pilot time.
SLAR	Side Looking Airborne Radar

SLDMB	Self-Locating Datum Marker Buoy
Small Aircraft	Aircraft of less than 12,500 pounds maximum certificated weight.
Space Available	Transportation where additional seating is available on a Coast Guard aircraft that is already scheduled for an official purpose without degrading mission capability.
Space Required Passengers	Any eligible person evaluated by competent medical authority and referred to another medical facility due to inadequate medical facilities in the local area.
Special VFR Operations	Aircraft operating in accordance with clearances within controlled airspace in meteorological conditions less than the basic VFR weather minima.
Squawk	To transmit a specific IFF transponder code in a specific mode, as in "Squawk mode 3 code 1277".
SRR	Short Range Recovery
SSO	Sensor Systems Operator
STRIP ALERT	A special type of readiness status construed to mean that facilities are ready to proceed within a specified number of minutes from notice (i.e., less than 30 minutes, but not less than 15 minutes).
SWET	Shallow Water Egress Training
TA	Transportation Authorization
TACAN	Tactical Aid to Navigation
TACON	Tactical Control
TAD	Temporary Additional Duty (USCG)
Takeoff Safety Speed	A referenced airspeed obtained after liftoff at which the required one-engine-inoperative climb performance can be met.
TAS	True Airspeed
TCAS	Traffic Alert and Collision Avoidance System
TDY	Temporary Duty (DOD)
Technical Observer	A person other than an aviator or aircrew member who is needed for a flight because of special knowledge, experience, or skill, when these qualities are required in flight to more effectively accomplish Coast Guard missions. A Technical Observer can be either active duty, DOD, active duty Coast Guard, a Coast Guard civilian employee or a civilian technical expert.
Test Flight	An airborne functional check to establish if an airframe or equipment, while subject to design environment, is operating properly.
Third Pilot Time	That time a pilot in a three pilot flight crew spends performing navigational duties at the navigator's position in a C-130 aircraft. For any flight, the total Third Pilot Time credited to pilots shall not exceed the aircraft time.
TO	Technical Observer
TOLD	Takeoff and Landing Data
Total Pilot Time	That time spent at a flight control position (in an authorized aircraft or simulator) by Coast Guard aviators and student pilots who are assigned duty involving flying. It consists of First Pilot Time and Copilot Time.
Transportation	The act of moving personnel and/or cargo from point A to point B on a Coast Guard aircraft.

TRC	Thermal Recovery Capsule
True Airspeed	The airspeed of an aircraft relative to undisturbed air.
TSO	Tactical System Operator
TTP	Tactics, Techniques, Procedures
TVI	Tactical Vertical Insertion
Type	A specific kind of aircraft, such as H-65, HU-25, HC-130, etc.
UA	Unmanned Aircraft
UAS	Unmanned Aircraft System
UHF	Ultra High Frequency radio
UP	Unmanned Aircraft System Pilot
UR	Unsatisfactory Report of Aeronautical Material
USAF	United States Air Force
U.S. Uniformed Services	Includes the Coast Guard, Army, Navy, Marines, Air Force, the Commissioned Corps of the U.S. Public Health Service, and the National Oceanic and Atmospheric Administration.
UTC	Universal Time Coordinated (ZULU time)
V1	Takeoff decision speed (formerly denoted as critical engine failure speed).
V2	Takeoff safety speed.
V2min	Minimum takeoff safety speed.
VA	Veterans Administration
Vertical Replenishment (VERTREP)	Delivery of supplies by aircraft versus by ship.
VERTREP	Vertical Replenishment
VFR	Visual Flight Rules
VHF	Very High Frequency radio
VI	Vertical Insertion
VIP	Very Important Person
Visual Flight Rules (VFR)	Set of procedures, which must be followed when flying in Visual Meteorological Conditions (VMC).
Visual Meteorological Conditions (VMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima, allowing flight by visual reference to the ground to be safely conducted.
VMC	Visual Meteorological Conditions
VNE	Velocity Not to Exceed
VOR	Very High Frequency Omnidirectional Range station
VORTAC	Collocated VOR and TACAN
VR	Takeoff rotation speed.
VS	Stalling speed or the minimum steady flight speed at which the airplane is controllable.

VSO	Stalling speed or the minimum steady flight speed in the landing configuration.
VUAV	Vertical Unmanned Aerial Vehicle
XO	Executive Officer
Z	ZULU Time or Universal Time Coordinated

This Page Intentionally Left Blank

Section A. Introduction

A.1. Overview

This appendix provides the basic format for a standard organization of Coast Guard air units. It also sets forth the minimum requirements for organizing, administering, and operating such units. This format should be modified only when necessary to meet individual unit requirements. Commanding officers of air units shall promulgate the organization manuals for their air unit. The first chapter shall cover any general principles desired, including the mission of the unit, and any other general information appropriate to the scope of the chapter. The second chapter shall cover department organization and detailed duties. The third chapter shall cover watch organization as developed for the unit. The fourth chapter shall cover the system of unit orders and instructions. Additional chapters are authorized as necessary.

Section B. General Organizational Principles

B.1. Overview

Coast Guard air units shall be organized and operated in accordance with the basic principles contained in the Coast Guard Organization Manual, COMDTINST M5400.7 (series), and Coast Guard Regulations, COMDTINST M5000.3 (series).

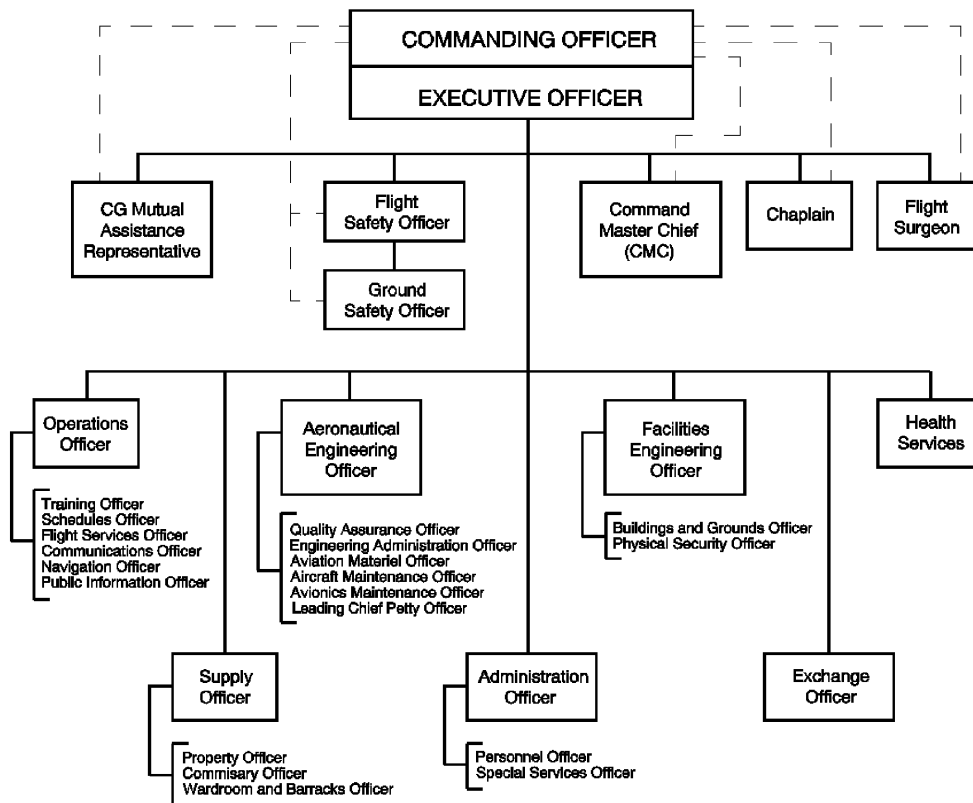
Section C. Standard Unit Organization

C.1. Standard Organization

Figure A-1 provides a standard organization for air units. All functions of the unit must be stated in the unit's organizational chart. Air units are authorized to make additions and deletions of functions and duties where necessary. Horizontal changes in the existing chart should be avoided. The size of the unit and local conditions (physical layout, personnel allowance, type of aircraft, communications, and other factors) determine any necessary changes. Collateral duties or other duties peculiar to an individual unit may be added to the organizational chart without changing its effectiveness or its basic purpose.

C.2. Department Heads

Department heads shall be commissioned officers or warrant officers. The commanding officer shall designate department and assistant department heads in writing.



cg9100032a

Figure A-1.

Section D. Duties

D.1. Commanding Officer

Personnel who report directly to the commanding officer are indicated by a dotted line in figure A-1. The duties of the commanding officer are as follows:

- Perform the duties of the commanding officer as specified in Coast Guard Regulations.
- Be responsible for the administration and direction of all activities of the unit.
- Monitor flight proficiency and training of all assigned flight crew members, and ensure that personnel assigned to operational flight duty meet all appropriate minimum recurrent training requirements.
- Monitor the accuracy of Aviation Career Incentive Pay (ACIP), Hazardous Duty Incentive Pay (HDIP), and Special Duty Assignment Pay (SDAP) paid to eligible assigned personnel. Assign one or more flight pay system manager(s) to assist in this effort.

D.2. Executive Officer

The duties of the executive officer are as follows:

- Perform the duties of an executive officer as specified by Coast Guard Regulations.
- Assist the commanding officer generally in administration of the functions of the unit.
- Act as senior member of the Unit Safety and Health Committee.
- Supervise the Master-At-Arms (MAA). The Master-At-Arms shall be a senior petty officer designated by the executive officer. The MAA shall perform those duties as specified by Coast Guard Regulations.
- Act as president of Unit Permanent Mishap Board.

D.3. Coast Guard Mutual Assistance Representative

The Coast Guard Mutual Assistance Representative administers the Mutual Assistance Fund in accordance with applicable directives.

D.4. Flight Safety Officer

The duties of the flight safety officer are as follows:

- Assist and advise the commanding officer in matters pertaining to flight safety.
- Act as a member of the Unit Safety and Health Committee and the Unit Permanent Mishap Board.
- Other duties as outlined in Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

Continued on next page

D.5. Ground Safety Officer

The duties of the ground safety officer are as follows:

- Assist and advise the commanding officer in matters pertaining to ground safety.
- Coordinate the application of and unit conformance with safety and environmental standards.
- Act as a member of the Unit Safety and Health Committee.
- Other duties as outlined in the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).

D.6. Chaplain

The duties of a Chaplain are:

- Perform the duties of chaplain as specified in Coast Guard Regulations.
- Assist the commanding officer in promoting unit well being.

D.7. Command Master Chief

A Command Master Chief (CMC) is the liaison between enlisted work force and command cadre.

Continued on next page

D.8. Flight Surgeon

The duties of the flight surgeon are:

- Thoroughly understand all operational missions of the unit and routinely participate as a crew member on each of these missions.
- Be familiar with the operational missions of other Coast Guard units in the local area.
- Have a general understanding of the flight characteristics of the aircraft assigned to the unit and be thoroughly familiar with the human factors involved in pilot and crew member interaction with the aircraft.
- Be familiar with this manual and the Shipboard-Helicopter Procedures Manual, COMDTINST M3710.2 (series) (if assigned to a unit which deploys helicopters), with specific emphasis on rescue and survival equipment, flotation equipment, protective clothing, oxygen equipment, and flight safety.
- Ensure that aviation personnel are physically and psychologically fit for flight duty.
- Perform physical examinations on all aviation personnel in accordance with the Medical Manual, COMDTINST M6000.1 (series). The flight surgeon shall make recommendations to the commanding officer concerning the medical status of aviation personnel and issue grounding and up notices for final approval by the commanding officer.
- Maintain an active interest and participation in the station flight safety program.
- When required, participate as medical member of Unit Permanent Mishap Boards. In this regard, the FS is responsible for completion of the Medical Officer's Report in accordance with the Safety and Environmental Health Manual, COMDTINST M5100.47 (series).
- Serve as advisor to the command on matters of occupational health and safety.
- Actively participate in the unit aviation physiology training program to ensure that all aviation personnel are capable of satisfactorily coping with the hazards of flight. Conduct lectures and demonstrations on aviation physiology.
- Advise the command on MEDEVAC operations. Participate, as required, on MEDEVAC missions.
- Participate in a program of continuing education in aviation medicine to include familiarity with information published for flight surgeons by the other branches of the Armed Forces.

Continued on next page

D.9. Operations Officers

The duties of the operations officer are as follows:

- Perform the duties of the head of a department as specified by Coast Guard Regulations.
- Coordinate and control movements of aircraft and boats (and vehicles, when operationally employed). Establish fuel loadings for aircraft and boats.
- Maintain aircraft and station emergency bills.
- Administer the program of operational readiness of aircraft and associated equipment.
- Manage and direct training of pilots and air crewmen. Coordinate training syllabi, both flight and ground, in accordance with pertinent Commandant's directives.
- Provide flight, communications, weather, navigation, and public information services as required.
- Supervise Flight Examining Board and Crypto Board.

D.10. Training Officer

The duties of the training officer are as follows:

- Assist the Head, Operations Department in planning, coordinating, and executing unit training program
- Prepare unit training courses
- Procure and maintain unit training aids
- Maintain unit personnel training jackets

D.11. Standardization Officer

The duties of the standardization officer are as follows:

- Advise Commanding Officer and Operations Officer on flight training and standardization issues
- Manage pilot and aircrew training and standardization programs
- Maintain unit pilot training records
- Organize and chair unit Flight Standards Board and Flight Examining Board
- Maintain pilot upgrade and recurrent training syllabi

D.12. Schedules Officer

The schedules officer prepares the daily flight schedule and pilot and operations duty officer watch schedules.

Continued on next page

D.13. Flight Services Officer

The duties of the flight services officer are as follows:

- Provide services and equipment for search and flight planning
- Provide access to weather briefing, aircraft clearance, and air traffic control services
- Maintain weight and balance records, flight logs, reports, and records
- Maintain read and initial file
- Maintain sufficient records to enable the preparation of such reports as the operations officer may require

D.14. Communications Officer

The duties of the communications officer are as follows:

- Provide communications services
- Supervise the communications center and handling of message traffic
- Administer communications procedures and training
- Provide control of classified material and cryptographic devices

D.15. Navigation Officer

The duties of the navigation officer are as follows:

- Provide charts, publications, navigation equipment, and records
- Maintain flag locker
- Maintain Area Navigation (RNAV) database

D.16. Public Information Officer

The duties of the public information officer are as follows:

- Provide public information services, including videos, slides, projectors, and articles cleared for release to the public
- Provide photographic services
- Establish channels and procedures for spot news coverage

Continued on next page

**D.17. Auxiliary
Aviation Liaison
Officer**

The duties of the Auxiliary Aviation Liaison Officer (AUXLO) are as follows:

- Provide managerial oversight to the Auxiliary Aviation program in regards to recurrent training, Auxiliary pilot, aircrew and observer qualification programs, survival equipment, etc.
 - Ensure the Air Station and District Command Centers are aware of the Auxiliary Aircraft schedules and operations.
 - Coordinate all Auxiliary patrols with the regional/squadron Auxiliary Aviation Coordinator (AAC).
 - Mentor Auxiliary pilots and Observers by overseeing the Auxiliary Aviation program as directed by COMDTINST 16798.1 (series).
 - Provide input to the Operations Officer on Auxiliary Aviation capabilities during operational or contingency planning.
 - Act as the primary point of contact for connectivity between the Auxiliary District Aviation Board, Auxiliary Flight Examining Board, District Staff Officer – Aviation (DSO-AV), and the Coast Guard.
 - Assist the Flight Safety Officer in any Auxiliary aircraft mishap investigation.
 - Ensure radio log contains entries for each Auxiliary mission.
 - Ensure all necessary reports (safety patrols, logistics, SAR and MEP flights), log entries, statements and notifications concerning Auxiliary missions and mishaps are completed and forwarded as applicable.
 - As applicable, provide the duty FS with a ration count (CG-3123) for the meals consumed by Auxiliaries under orders.
 - Establish channels and procedures for spot news coverage.
-

**D.18. Aeronautical
Engineering
Officer**

The aeronautical engineering officer shall:

- Perform the duties of the head of a department as specified by Coast Guard Regulations
 - Manage the Aeronautical Engineering Department and be responsible to the commanding officer for the maintenance of aircraft, associated equipment and facilities
 - Administer the Aeronautical Engineering Department in accordance with controlling directives
 - Coordinate maintenance scheduling with Operations Department requirements
 - Establish programs for fuel and oil contamination prevention, foreign object damage prevention, and corrosion control
-

Continued on next page

D.19. Quality Assurance Officer

The duties of the quality assurance officer are as follows:

- Ensure the quality of maintenance of the unit's aircraft
- Maintain a master library of all technical publications and directives; review all incoming technical publications and directives to determine their applicability to quality assurance; assist in preparation of local maintenance instructions, and ensure that each shop has available all current publications applicable to its work area.
- Review work orders, inspection sheets, aircraft maintenance records, and all logs and records pertaining to the aircraft for recurring discrepancies.
- Ensure that established and adequate procedures are observed for conducting ground tests and routine and special inspections. Perform spot quality inspection checks. Ensure that current standard procedures are observed by maintenance personnel in the repair and bench testing of components.
- Ensure all work guides, checkoff lists, work cards, and maintenance forms used to define or control maintenance are complete and current.
- Participate in maintenance flights and ensure that pilots and crews are briefed prior to maintenance flights so that the purpose and objectives of the flights are clearly understood.
- Ensure that modifications to aircraft and aircraft components have been incorporated and ensure that support equipment meets calibration and safety requirements.
- Review Unsatisfactory Reports of Aeronautical Material (URs) and CG-5071s (Aviation Electronics Maintenance Record) for trends to determine when discrepancies in any area are increasing or exceeding normal limits.
- Approve or reject completed work based on appropriate standards.
- Spot check equipment received for use, or returned for repair, to ensure that its condition, identification, packaging, preservation and configuration are satisfactory and, when applicable, that shelf life limits have not been exceeded.
- Establish qualification requirements for quality assurance inspectors and collateral duty quality assurance inspectors. Review the qualifications of personnel assigned to these positions and maintain a record of all designated inspectors.

Continued on next page

**D.20. Engineering
Administration
Officer**

The duties of the engineering administration officer are:

- Provide administrative and clerical services for the Aeronautical Engineering Department; establish and control a system for correspondence receipt, distribution, reply, and filing; ensure submission of all required reports; prepare and distribute internal maintenance directives, schedules, and information; and maintain aircraft logbooks and historical records.
- Distribute all nontechnical information and publications.
- Supervise and coordinate engineering administrative responsibilities with other departments as required.
- Establish engineering training requirements. Coordinate with the Operations Department, Aeronautical Engineering Department training requirements and assist in obtaining necessary school quotas; program and provide adequate on-the-job training, and coordinate aircrew training with Operations.

Continued on next page

**D.21. Aviation
Materiel Officer**

The duties of the aviation materiel officer are:

- Maintain liaison with the Supply Department and provide technical advice for procuring and requisitioning aeronautical engineering supplies and allowance list spares.
- Compile and analyze maintenance usage data, Not Mission Capable - Supply (NMCS), Not Mission Capable - Maintenance (NMCM), Not Mission Capable Depot Level Maintenance (NMCD), experience, and recommend changes to stocking list when justified.
- Inventory aircraft upon receipt and transfer and ensure that proper inventory log entries are made.
- Be responsible for procurement, custody, issue, and condition of all general and special tools required by the Aeronautical Engineering Department.
- Request, receive, identify, classify, store, and issue all special aviation materiel required by the Aeronautical Engineering Department.
- Assist the Supply Department in maintaining a complete inventory of materiel required in the operation of the Aeronautical Engineering Department and initiate immediate replacement to established stocking levels.
- Periodically spot-check aviation materiel in supply to ensure that shelf life has not expired.
- Estimate budgetary needs and administer funds allotted for procurement of material and services. Establish internal methods and procedures by which maintenance personnel can obtain required materiel to support the maintenance effort.
- Initiate action for survey in the event of loss, damage, or destruction of accountable items.
- Ensure that all Class 265 materiel is carefully screened and a positive determination is made that repair of such materiel is beyond unit or local repair capability. Ensure that materiel is properly tagged, packaged, and expeditiously processed.

Continued on next page

**D.22. Aircraft
Maintenance
Officer**

The duties of the aircraft maintenance officer are:

- Direct preventive and corrective maintenance of aircraft, related equipment, and shop facilities.
- Plan, schedule and control all phases of maintenance. Perform progress checks on all work assigned. Maintain aircraft maintenance status board and keep cognizant personnel informed of aircraft status. Request required material from Aviation Materiel for performance of aircraft and equipment maintenance. Establish a system to ensure delivery of necessary items at the required time and place.
- Ensure that maintenance instructions are prepared when required.
- Ensure prompt and safe movement of aircraft to facilitate the maintenance effort. Prepare necessary aircraft parking plans.
- Maintain all ground support equipment including compliance with inspection requirements.
- Provide aircraft line maintenance including aircraft preflight, aircraft post-flight, aircraft servicing, and transient maintenance. Conduct foreign object debris (FOD) prevention program.
- Fuel and defuel aircraft. Manage the aviation fuel facilities.
- Coordinate the training of all personnel involved in aircraft ground handling and aircraft ground support equipment operation. Provide aircraft security including tie-downs and chocks.
- Accomplish required aircraft run-up, aircraft washing, and aircraft interior cleanup.
- Process repairable material to serviceable status.
- Ensure that all materiel and equipment is properly stored, secured, and accounted for.
- Ensure that precision measurement equipment is calibrated and certified in accordance with current directives.
- Prepare Unsatisfactory Report of Aeronautical Material (UR) in rough and forward to Engineering Administration.
- Initiate requests for shop materiel required, periodically review shop usage, and establish inventory reorder points.

Continued on next page

D.23. Leading Chief Petty Officer (LCPO)

The duties of the LCPO include, but are not limited to:

- Serve as Senior Enlisted Advisor for the Aviation Engineering Department
- Supervise the Aviation Engineering Administration staff
- Ensure Aviation Engineering Department Instructions and Standing Orders are current and enforced
- Brief and indoctrinate incoming personnel
- Coordinate monthly Chief Petty Officer, Watch Captain and Workforce/Duty Section assignment meetings
- Oversee flight orders, ACIP, SDAP and operational/technical qualification programs for assigned enlisted personnel
- Administer the Airman Program
- Be aware of and proactive regarding the general welfare of the aviation enlisted personnel assigned to the unit

D.24. Administration Officer

The duties of the administration officer are as follows:

- Perform the duties of the head of the department as specified by Coast Guard Regulations
- Administer, under the direction of the executive officer, all functions pertaining to personnel
- Provide educational services
- Maintain general directives files
- Provide clerical and mail services
- Provide special services, if not under the Exchange Officer
- Provide medical services, including dental and sanitary services, if a medical officer is not assigned
- Supervise wardroom and barracks activities
- Supervise functions of Personnel Examining Board, Audit Board, and Inventory Board

D.25. Personnel Officer

The personnel officer administers personnel accounting, orders, correspondence, files, and reports.

D.26. Special Services Officer

The special services officer provides special services such as housing, recreation, insurance, voting, bond sales, charity drives, and legal assistance.

Continued on next page

D.27. Medical Administration Officer (if medical officer is not assigned)

The medical administration officer:

- Coordinates medical and dental services
- Supervises first aid program, including maintenance of medical kits in aircraft, boats, and vehicles
- Conducts sanitary inspections of buildings and grounds with particular attention to the galley and food handlers
- Ensures security of controlled substances

D.28. Facilities Engineering Officer

The duties of the facilities engineering officer are:

- Perform the duties of the head of a department as specified by Coast Guard Regulations
- Oversee unit environmental compliance program
- Administer program for maintenance and repair of buildings, grounds, boats, and vehicles including aviation fueling facilities and fuel trucks
- Provide physical security services including fire fighting and crash rescue equipment and services
- Administer boat and vehicle operator training and qualification program

D.29. Buildings and Grounds Officer

The duties of the buildings and grounds officer are:

- Conduct a program for progressive preventive and corrective maintenance of all structures
- Supervise the upkeep of grounds
- Supervise the station's maintenance force, including use of tools, equipment, and shop

D.30. Physical Security Officer

The duties of the physical security officer are:

- Maintain fire fighting equipment such as trucks, hydrants, hoses, extinguishers, and crash kits in buildings, vehicles, boats, and on grounds
- Administer physical security program, including supervision of the gate and security watches
- Provide identification, parking, and traffic control for vehicles
- Supervise Government vehicle driver examinations

Continued on next page

D.31. Boats and Vehicles Officer

The duties of the boats and vehicles officer are:

- Maintain boats assigned to the air station
- Provide boat operator training
- Maintain station vehicles

D.32. Supply Officer

The duties of the supply officer are as follows:

- Perform the duties of the head of a department as specified by Coast Guard Regulations
- Procure, stock, and issue supplies and equipment
- Prepare and maintain required fiscal and supply records and reports
- Operate the unit mess
- Supervise Survey Boards
- Supervise wardroom and barracks activities if these duties are not assigned to the Administration Department

D.33. Property Officer

The duties of the property officer are:

- Maintain master record of plant property
- Maintain and supervise station allowance lists
- Provide accountability for property issued on custody
- Dispose of excess and surveyed property

D.34. Commissary Officer

The duties of the commissary officer are:

- Provide commissary services, including receipt and preparation of food and galley equipment
- Ensure cleanliness and sanitation in galley and commissary
- Prepare commissary reports, inventories, and requisitions
- Carry out such instructions as are promulgated in the Comptrollers Manual and Coast Guard Regulations
- Direct the training of subsistence specialists

D.35. Wardroom and Barracks Officer

The duties of the wardroom and barracks officer are:

- Supervise cleanliness and orderliness of officers' wardroom, mess room pantry, and sleeping spaces
 - When so appointed by the commanding officer, act as mess treasurer and carry out functions as specified in pertinent instructions
 - Supervise the Master-at-Arms (MAA)
-

Continued on next page

D.36. Exchange Officer

The Exchange Department organization must be tailored to the specific Exchange responsibilities of the unit. Coast Guard Non-Appropriated Fund Instrumentalities Manual, COMDTINST M7010.5 (series), is the controlling authority and shall be used as a guide to Exchange Department organization.

D.37. Weapons Officer

Weapons Officer (for air stations with airborne use of force capabilities only) duties are:

- Direct the training, maintenance, security, and transportation for all operational and training missions requiring weapons and ammunition
 - Assist Operations Officer and XO in matters pertaining to weapons program
 - Ensure security, inventory, and maintenance of all weapons
 - Maintain library of publications and directives for unit weapons
 - Manage unit weapons training, safety, and testing
 - Manage unit Non-Lethal Weapons (NLW) training, safety, and testing
 - Additional specific duties of the Weapons Officer are outlined in USCG Regulations, COMDTINST M5000.3 (series), and Chapter 2 of the Ordnance Manual, COMDTINST M8000.2 (series)
-

Section E. Watch Organization and Duties

E.1. Officer Watches and Duties

E.1.a. Senior Duty Officer (SDO)

The SDO shall be the senior aviator in the duty section. As the senior officer of the watch organization, the SDO shall be responsible for the operation, administration, and security of the unit outside of normal working hours. Specific duties of the SDO shall be defined in station instructions.

E.1.b. Operations Duty Officer (ODO)

The ODO shall act as assistant to the SDO. Specific duties of the ODO shall be defined in station instructions.

E.2. Enlisted Personnel Watches and Duties

Because of their varying size and local conditions, air units are not required to establish all of the following watches. In the interest of standardization, whenever these watches are established, they shall be titled as listed. Duties pertaining to each watch shall be specified in station instructions.

- Officer of the Day (OOD)
- Junior Officer of the Day (JOOD)
- Duty Master-At-Arms (MAA)
- Engineering CPO
- Watch Captain (The senior member of the enlisted aviation duty section)
- Gate Watch
- Switchboard Watch
- Radio Watch
- Security Watch
- Duty Section

E.3. Standard Watch Organizational Chart

Each air unit shall maintain a watch organization chart.

E.4. Duty Schedule

Each air unit shall publish a duty schedule which lists the personnel assigned to each watch position.

- The duty schedule shall include the names of personnel assigned to aircraft ready crews.
 - The selection of properly qualified personnel for assignment to aircraft ready crews is a command function. The integrity of ready crews shall be carefully maintained. Changes in ready crew assignments shall be made only with approval of the commanding officer or his designated representatives.
-

Section F. Unit Orders and Instructions

F.1. Operations and Emergency Bills

The following operations and emergency bills shall be promulgated as appropriate:

- Fire
- Field Crash
- Water Crash
- Search and Rescue
- Disaster Control
- Communications
- Hurricane or Destructive Storm Evacuation Plan
- Pre-mishap Plan
- Recovery and Salvage Plan

F.2. Instructions

Instructions shall be promulgated by the commanding officer to standardize procedures, express policy, establish doctrine, and comply with directives of higher authority. Each command shall establish numbered directives in accordance with the provisions of Commandant Instructions. All personnel must be thoroughly familiar with all unit instructions pertaining to their duties, watches, and routine.

F.3. Notices

Unit notices shall be issued as necessary to announce events of short-lived or passing interest or to direct attention to existing directives. Notices shall be numbered in accordance with the provisions of Commandant Instructions.

Section G. Recommended Management Practices

G.1. Overview

The preceding paragraphs of this appendix specify the organization of Coast Guard air units. This required organization has been developed from experience and encompasses many practices presently employed at Coast Guard air units. This section deals with recommended practices. Adoption of these specific management practices is not mandatory. Their use has been helpful at many air units and they may be used at the discretion of the commanding officer. If these practices are not used as specifically outlined, the subject matter should be covered adequately in some other manner.

G.2. Inspection of Operational Equipment

The manner and frequency of inspection of aircraft, boats, vehicles, fire/crash trucks, and certain items of aircraft and station emergency equipment are specified in other directives. Only by frequent routine inspections can the commanding officer be assured that his operational equipment is in fact ready for use in accomplishing the mission of the unit.

G.2.a. Daily Inspection

An Operational Equipment Status Board should be maintained in the operations center to show the status of aircraft, boats, crash trucks, and other equipment desired.

G.2.b. Periodic Inspection

A more detailed inspection of aircraft, boats, crash trucks, and other equipment as desired should be conducted weekly. This inspection should be made by officers or chief petty officers, using an established inspection form, and should include examination of the structure, regular equipment, rescue equipment, and safety equipment.

G.3. Use of Unit Checklists

Unit checklists provide some assurance that specific required actions will be taken, particularly under the stress of operational emergencies. Unit checklists should be promulgated for routine use by cognizant personnel.

G.3.a. Search and Rescue (SAR) Checklists

SAR checklists are used for dispatching units in response to emergencies, organizing searches, conducting communications and harbor checks, and ensuring required actions are performed in any SAR case.

G.3.b. Medico Checklists

Medico checklists are used for obtaining advice, securing authorization papers, passing information, and other matters pertaining to medico cases.

G.3.c. Daily Routine Checklists

Daily routine checklists are used for ensuring prompt and timely actions by the ODO, OOD, JOOD, switchboard watch, and other personnel actively involved in the daily routine of the unit.

G.3.d. Ticker Files

Tickler files are used to make a positive check on the timely submission of the units recurring reports and other correspondence.

G.3.e. Pre-mishap Plan Checklists

Pre-mishap plan checklists are used to ensure that all actions required by the unit pre-mishap plan are accomplished in a timely fashion.

Continued on next page

G.4. Pilot Status Report

A pilot status report should be established to post information on each pilot's aircraft qualifications, total pilot time, monthly and semiannual pilot hours, and instrument approach statistics.

G.5. Training Status Reports

Training status reports, for posting information on the training status of both pilots and aircrew members, should be established in the training office.

G.6. Destructive Weather Plan

The primary purpose of a destructive weather plan is to provide protection for equipment while maintaining an acceptable SAR readiness before and after destructive weather.

G.6.a. Aircraft Repair and Supply Center (ARSC)

ARSC shall be included in the Fifth CG District destructive weather plan.

G.6.b. Aviation Training Center (ATC)

ATC shall be included in the Eighth CG District destructive weather plan.

This Page Intentionally Left Blank

Section A. General Organizational Principles and Aircraft Characteristics

A.1. Overview

Coast Guard aircraft fall into two broad categories: rotary wing (R/W) helicopters and fixed wing (F/W) airplanes. Each has specific capabilities that might make it more suitable than another for a particular mission. The R/W fleet is comprised of the H-65, MH-68 and H-60 helicopters. The F/W inventory of airplanes includes the HC-130, the HU-25, and two dedicated transport aircraft, the C-37 and the C-143.

A.2. Helicopters

The Coast Guard uses three different helicopter types, the H-60, the MH-68 and the H-65. R/W aircraft tend to be more complex, slower, and have shorter range than F/W craft. But they can embark on flight-deck-equipped cutters, or extend their range using Helicopter In-flight Refueling (HIFR) procedures in concert with these same cutters. They provide transportation to areas not normally accessible by F/W aircraft using capabilities that include landing at remote sites, sling loading, hoisting survivors, or hoisting items to personnel on the surface. Their maneuverability makes them ideal for searching in confined or congested areas, such as cities, airports, harbors, and inland waterways.

A.3. Airplanes

The Coast Guard uses four different F/W aircraft: the HC-130, the HU-25, and two dedicated transport aircraft, the C-37 and the C-143. The strengths of F/W aircraft generally include speed, range, and the ability to transport more people and cargo. Usually, they can loiter on scene longer than helicopters. Compared to helicopters, airplanes have better communications capabilities (more radios and higher operating altitudes) and are equipped with more sophisticated sensors. They are limited to operating from airport runways. The HC-130 can operate from other approved landing sites that may be gravel strips or unprepared fields. HU-25 and HC-130 aircraft can airdrop pumps, rafts, Datum Marker Buoys (DMBs), smoke markers, message blocks, and other small items.

A.4. Sensors

Coast Guard aviators have a variety of electronic sensors available to enhance normal observation capabilities. Using the right sensor in the right situation multiplies the likelihood of successfully detecting the object of a search. These sensors include personal devices such as photographic cameras, video cameras, night vision devices, and aircraft installed devices such as direction-finding equipment, flight reconnaissance cameras, and various forms of RADAR, ultraviolet line scanners, and infrared heat sensing devices. The handheld devices like cameras are carried routinely on Coast Guard operational missions. Specific models of cameras will vary at each air station, but they are all capable of capturing usable imagery from an aircraft. Night vision devices are not carried on every flight; rather, they are usually carried only on flights where their use is anticipated. Table B-1 in section B of this appendix contains information on the various sensors found in specific aircraft.

Continued on next page

A.4.a. Direction Finding
(DF)

Every operational Coast Guard aircraft has DF equipment, which enables it to track radio transmissions made over VHF-AM, VHF-FM, or UHF frequencies to the source. It is this gear that permits Coast Guard aircraft to locate distress signals emitted from an aircraft emergency locator transmitter (ELT) or from a vessel emergency position identification radio beacon (EPIRB). When Coast Guard pilots make radio contact with an aircraft or vessel in distress, they often ask the operator to transmit a "short count" over the radio. By doing this, they DF off the radio transmission frequency to verify their intercept heading to the distressed unit.

A.4.b. Radar

Radio Detection and Ranging or RADAR is the primary broad area all weather surveillance and detection sensor for Coast Guard aircraft. The basic concept of RADAR operation involves bouncing an electronic signal off a target for detection and range information. Fog or clouds do not degrade RADAR performance. Coast Guard aviators use RADAR for avoiding severe weather, terrain and to detect surface and air targets (when equipped). Modern multi-mode RADAR systems can incorporate synthetic aperture RADAR, Inverse Synthetic Aperture RADAR (ISAR), Moving-Target Indicator (MTI) RADAR, Pulse Doppler RADAR, Track While Scan RADAR, and Side-Looking Airborne RADAR (SLAR) capability in addition to Simple Pulse RADAR. All Coast Guard aircraft are equipped with radar, but the following radars have unique capabilities.

A.4.b.(1) APS-137(v)4

C-130H airplanes are equipped with the APS-137 inverse synthetic aperture RADAR for surface searching, and the APN-215 RADAR for weather avoidance. The APS-137 is an outstanding surface search RADAR. It is a multi-mode RADAR system capable of weather avoidance, navigation, and sea borne target surveillance and imaging. It provides automatic target tracking of multiple selected targets. Target data such as latitude/longitude, course, heading, bearing, distance, and speed are updated continuously. A video recorder tapes the RADAR displays. In calm seas (four feet or less) it can identify an oil slick. In addition, it has been found to be useful in following airborne targets.

A.4.b.(2) APS-143B(v)3

The HU-25D has the APS-143V(3) radar installed. Similar in concept to the C-130's APS-137, the APS-143 is designed to provide detection of maritime targets, terrain and weather avoidance, and oil spill detection capability. The APS-143 is a multi-mode radar, possessing normal surface detection mode, Synthetic Aperture RADAR (SAR), ISAR or contact "imaging" mode, Track-While-Scan (TWS), Moving-Target Indicator (MTI) and weather display capability. This radar can also simultaneously track up to 30 contacts, with the ability to dead reckon those contacts that are no longer within the radar's field of view.

Continued on next page

A.4.b.(3) Side Looking
Airborne Radar (SLAR)

SLAR is a RADAR system that “looks” perpendicular to the direction of travel to produce a wide swath of coverage. The APS-135 RADAR is the primary component of the SLAR system. Used primarily for International Ice Patrol support to detect and map ice bergs and ice flows, but are also capable of locating and mapping oil on the water. SLAR aircraft record all data digitally, and unlike its predecessor, in “real time.”

A.4.b.(4) APG-66(v)2

HU-25C model airplanes are equipped with a APG-66 Doppler Fire Control RADAR originally designed for intercepting other aircraft. This RADAR has unique capabilities that also make it very suitable for locating, intercepting, and tracking vessels. The APG-66 RADAR incorporates surface search, Air-to-Air, ground mapping and weather avoidance modes of operation. The computer-generated display provides target data on the RADAR screen that can be recorded on videotape. The APG-66 can cue the HU-25C’s Electro-Optical/Infrared (EO/IR) sensor to the designated RADAR target. The RADAR can provide weather mapping snapshots on demand and return to primary search modes without significant operator interaction and loss of target situational awareness.

A.4.b.(5) APS-127

The APS-127 sea surveillance RADAR is the original RADAR installed in the HU-25A aircraft. Provides surface search capability combined with a weather mode of operation. The APS-127 RADAR system provides a Planned Position Indicator (PPI) display at the Sensor Operators position and in the cockpit.

A.4.b.(6) RDR 1300C

The RDR 1300C RADAR system is a pulse RADAR that provides surface search and weather avoidance capability on the H-60 and H-65 helicopters. The RDR 1300C system is integrated with the aircraft avionics system to provide cockpit RADAR displays and target range and bearing information. The weather mode is color coded for enhanced weather recognition.

A.4.b.(7) AN/APN-215

The APN-215 RADAR is an older version of the RDR 1300C RADAR system and provides similar capability with an independent display that is not integrated with aircraft avionics systems. The APN-215 is primarily utilized for weather avoidance and navigation on the C-130H aircraft.

A.4.b.(8) AN/APN-241

The AN/APN 241 RADAR (installed on the C-130J) is a pulse RADAR that provides basic surface search and weather avoidance capability. The weather mode is color coded for enhanced weather recognition. The RADAR also has a predictive wind shear detection capability.

A.4.b.(9) RDR Primus
700

The RDR Primus 700 color RADAR is similar to the RDR 1300C and APN-215 RADAR systems in capability. It is X-Band RADAR system integrated into the MH-68 helicopter. Provides a surface search, enhanced weather and navigation capability.

Continued on next page

A.4.c. EO/IR

Electro-Optical/Infrared sensors can combine high resolution cameras, spotter scopes, IR, laser range finders, laser designators, laser illuminators, night vision devices, hyper spectral imagers and other sensors that can be typically combined and integrated into a turret system that is then integrated into the aircraft for 0 to 360 degrees field of view. The EO/IR sensors in typical CG applications include a day color camera with selectable fields of view, Low Light Level (LLL) Charge Coupled Device (CCD) cameras to provide digital camera imagery and increase sensor capability in low light conditions like dusk or poor weather. The IR sensor senses thermal differences provide a black and white image that is independent of surrounding light levels but can be impacted by environmental conditions

A.4.c.(1) MX-20 TS
EO/IR Turret

The C-130H CASPER system utilizes the L3/WESCAM 20" EO/IR turret that is mounted on the nose of the C-130H. The Model 20 is a tri-optics sensor with gyro stabilized imaging. There are two visible spectrum sensors and one IR sensor. The visible sensors/cameras included are an Electro-Optic Wide (EOW) camera and a Electro-Optic Narrow (EON) camera for high power zoom capability. The IR sensor has three selectable fields of view: wide, medium, and narrow Field of View (FOV).

A.4.c.(2) 16DS-I
FLIR/EO Turret

The HU25C/D sensor upgrade system (SUS) provided a WESCAM 16DS-i EO/IR turret similar to CASPER capability. The system has gyro-stabilized image sensors in a smaller 16" turret with a low magnification continuous zoom color TV camera and a high magnification step zoom monochrome IR camera.

A.4.c.(3) 12DS200
EO/IR Turret

The 12DS200 EO/IR system is a small EO/IR package procured for the H-65 and H-60 use on specialized missions. It has a dual sensor package that includes a color daylight CCD camera, and 3 FOV thermal imager. The system has been integrated with helicopter avionics to provide data on both cockpit and cabin displays.

A.4.c.(4) FLIR U7000
DSAIS EO/IR

The U7000 DSAIS EO/IR system is gyro stabilized two axis systems. Its primary sensor is an IR camera and the secondary sensor is a color CCD TV camera for day time use. It is a small compact 9" turret mounted on the MH-68 for AUF missions. The system provides an auto-tracker capability that allows operator input free EO/IR tracking of moving targets.

A.4.d. Automatic
Identification System
(AIS)

Automatic Identification System is a line of sight surface vessel transponder system that like TCAS will self report critical data such as vessels name, heading, location, cargo, destination, home port, etc. AIS systems will be placed in CG aircraft for display of vessel identification information.

A.4.e. Night Vision
Devices (NVDs)

Night vision devices come in several forms, including Night Vision Goggles (NVGs) and Forward Looking Infrared (FLIR). There are single tube viewers, such as "sniper scopes," and double-tubed, helmet or harness mounted goggles used by aviators. FLIR may be mounted on the aircraft or it may be handheld.

Continued on next page

A.4.e.(1) Night Vision
Goggles (NVGs)

Some F/W aircraft employ NVGs as a search tool used only by scanners. In the H-60, H-65, and MH-68 the pilots flying the aircraft also use NVGs. (These aircraft have NVG compatible cockpit lighting.) NVGs restrict peripheral vision, do not provide great depth perception, and cause greater crew fatigue. As a result, extensive training is necessary for pilots to obtain and maintain flight qualification with NVGs. NVGs work on the principle of reflected light. They can be thought of as image intensifiers or light amplifiers. They require some minimal illumination, either moonlight, star light, or illumination generated by the target. High intensity light may cause them to shut down and exposure to daylight may damage them.

A.4.e.(2) Forward
Looking Infrared (FLIR)

FLIR sensors detect temperature differences between objects and create a map of these thermal differences to form a visual image. The image created appears to the viewers in a form similar to a black and white negative. FLIR sensors are valuable for night operations and are useful for detecting changes in surface temperature caused by oil. Unlike NVGs, FLIR devices can also be valuable sensors during day operations. But high humidity, fog, clouds, and rain tend to scatter and absorb the available thermal energy, causing the effectiveness of FLIR sensors to decrease. Generally, a FLIR sensor has limited use as a pure search tool, but is effective in identifying objects detected by other means. In the HU-25C and D, and C-130H aircraft equipped with the CASPER sensor package, FLIR can be slaved to the radar for a visual display of a nearby radar target. The H-60 can be outfitted with a removable, turret mounted FLIR. This does limit the H-60's rough area landing capability. Several units report success using a handheld FLIR video camera pointed out of an open helicopter door.

Section B. Aircraft Characteristics

B.1. Overview

When planning a mission, one should be aware of Coast Guard aircraft characteristics. While the pilot is the final judge of aircraft capability during a mission, operations planners should be aware of the specifications of aircraft in the Coast Guard inventory. This will allow more informed decisions when allocating resources. Table B-1 provides the characteristics of Coast Guard aircraft.

Table B-1

	H-65	H-60	HC-130	HU-25	MH-68	C-130J
Inventory						
Funded Allowances:	90	35	26	17	8	6
Total:	102	42	30	41	8	6
MAX Weight (lbs.)	9,480	21,884	155,000	32,000	6,613	155,000
Fuel Capacity (lbs.)	1,900	6,460	62,900	10,000	1,055 ⁽⁴⁾	62,000
MAX Endurance (hrs.)	3+30	6+00	14+00	4+15	2+15 ⁽⁴⁾	20+00
Cruise Speed (KTAS)	125	125	290	410	137	320
Max Range (NM)	375	700	4,500	1,700	363	5,500
Radius of Action	150 ⁽¹⁾	300	1,600	750	100	2000
Normal Crew (pilots/aircrew)	2/1	2/2	2/5	2/3	2/1	2/2
SAR Equipment	Hoist	Hoist	Raft	Raft	Hoist	N/A
	Sling	Sling	Litter	Litter	Sling	
	Basket	Basket	Pump	Pump	Flares	
	Litter	Litter	Homer	Homer	DMBR	
	Pump	Pump	Flares	Flares	Raft	
	Homer	Homer	DMB	DMB		
	Flares	Flares	SLDMB	SLDMB		
	DMB	DMB				
	Raft	Raft				

Continued on next page

	H-65	H-60	HC-130	HU-25	MH-68	C-130J
Special Equipment	NVG ⁽⁵⁾	NVG ⁽⁵⁾	NVG ⁽⁵⁾	NVG ⁽⁵⁾	NVG ⁽⁵⁾	NVG ⁽⁵⁾
	Cargo Hook (2K lbs) ⁽⁶⁾	Cargo Hook (6K lbs)	SLAR ⁽⁹⁾	AN/APS 127	HUD	WX Radar (APN-241)
	FLIR ⁽²⁾	FLIR ⁽²⁾	APS-137	HU-25D APS-143 IR/Day Zoom Camera	M240	
	Searchlight	Searchlight	CASPER	HU-25C APG-66 FLIR Day Zoom Camera	.50 Cal Sniper Rifle	
	X-band Radar (Telephonics 1300)	X-band Radar (Telephonics 1300)	WX Radar (AN/PV-215)		FLIR	
	SLDMB	SLDMB				
Communications	UHF	UHF	UHF	UHF		UHF
	VHF-FM	VHF-FM	VHF-FM	VHF-FM	VHF-FM	VHF-FM
	VHF-AM	VHF-AM	VHF-AM	VHF-AM	VHF-AM	VHF-AM
	HF	HF	HF	HF	HF	HF
	Vinson	Vinson	Vinson	Vinson	Vinson	Vinson
	DES	ANDVT	ANDVT	ANDVT	ANDVT	ANDVT
		DES ⁽²⁾	MILSATCOM ⁽⁸⁾	Loudhailer	Loudhailer	MILSATCOM ⁽⁸⁾
				COTHEN ⁽²⁾	COTHEN ⁽²⁾	
				MILSATCOM ⁽⁷⁾	MILSATCOM ⁽⁷⁾	
Navigation	VOR	VOR	VOR/DME	VOR	VOR	VOR/DME
	ADF ⁽³⁾	ADF ⁽³⁾	ADF ⁽³⁾	ADF ⁽³⁾	RNAV	ADF ⁽³⁾
	RNAV	DOPPLER	INS	RNAV	TACAN	INS
	TACAN	TACAN	TACAN	TACAN	GPS	TACAN
	GPS	GPS	GPS	GPS		GPS

Continued on next page

	H-65	H-60	HC-130	HU-25	MH-68	C-130J
				INS		
Notes:						
(1) H-65 radius of action reduced to approximately 120 nm with the addition of a rescue swimmer.						
(2) Not all aircraft. Some MH-60J have WESCAM 12D200 FLIR while H-60J have FLIR 2000						
(3) ADF – LF/UHF/VHF-FM/VFH-AM.						
(4) Auxiliary tank is available for an additional 180 lbs of fuel (20 min additional endurance).						
(5) F/W: Scanner position (crewmen) only. R/W: Fully capable all positions (including pilots).						
(6) 2k lbs is max capacity. Due to H65 weight concerns, 1K lbs is a routine operational value.						
(7) On all HU-25C and D model aircraft.						
(8) On CASPER equipped aircraft or specifically prearranged.						
(9) Only installed on 1500 series HC-130s stationed at Air Station Elizabeth City						

Section C. Helicopters

C.1. Overview

Coast Guard R/W aviators are equipped and trained to fully exploit the unique capabilities of the helicopter. The H-65 Dolphin is used for short range missions, the H-60 and MH-60 (armed) Jayhawk is used for more distant or heavier lift missions and the MH-68 is used for the Coast Guard's Airborne Use of Force missions. Helicopters are not limited to operating only from airports. When considering an unprepared site, the aircraft commander must consider obstructions, loose debris, and stability of the surface. Debris can be ingested into the engine, damage the rotors, or be blown in the air to obscure the landing sight. If landing is not advisable, then hoisting may be an option.

C.2. Hoisting

Coast Guard helicopters are equipped with an electrically controlled, hydraulically actuated hoist with emergency cutaway capability. The hoist has approximately 200 feet of cable and a maximum capacity of 600 pounds. A helicopter hoist is a demanding evolution that involves the entire crew as a team. The hoist mechanism is normally controlled by an air crewman who is in constant communication with the pilot. Personnel may be hoisted by using a basket, a litter, or a sling. Hoisting is authorized to or from remote, isolated sites and vessels where a landing would be impractical. There is always a certain amount of risk involved in conducting a hoist. As a result, Coast Guard policy does not allow the hoisting of personnel for convenience or administrative purposes. A night hoist from a small vessel in rough seas not only places the person being hoisted at risk, but the aircraft and vessel as well. Due to the risks associated with hoisting, flight surgeons are consulted prior to each aeronautical medical evacuation (MEDEVAC) to evaluate whether or not the medical distress is serious enough to warrant hoisting an individual. A pilot in command (PIC) can always choose not to conduct a hoist if he or she determines that it cannot be conducted safely.

C.2.a. Rescue Swimmers

A rescue swimmer is a specially trained aviation survival technician who departs the helicopter to assist in accomplishing the hoist. He or she enters the water or an otherwise inaccessible area to help the victims into the hoisting device. Rescue swimmers are certified emergency medical technicians. Only the PIC has the authority to employ the rescue swimmer.

C.3. Common Equipment

The H-60 and H-65 helicopters are equipped with a cargo hook for sling load operations. The H-65 has 2,000-pound capacity and the H-60 has a 6,000-pound capacity. A sling load operation must be preplanned so that an accurate assessment of the necessary precautions can be made. A multimillion-candle power searchlight can be fitted on all Coast Guard helicopters to illuminate targets during night operations. The RDR-1300C weather/search radar system is used on the H-60 and H-65 for detection of small surface targets at short range, for ground mapping to enhance navigation, and for long-range weather surveillance for storm avoidance or penetration.

Continued on next page

C.3.a. Critical Component

All helicopters generate their lift and thrust from the motion of their main rotor blades through the air mass. They use a gearbox to transmit the power required for this motion from the engines to the main and tail rotors. The transmission gearbox is a critical element in the aerodynamic process, and, as a result, a chip detector is placed there to monitor the transmission's integrity. When the chip detector indicates that chips of metal are present in the gearbox oil, the helicopter must land and be checked as soon as possible.

C.3.b. Flight Cover

F/W aircraft frequently fly "cover" for helicopters performing hoist missions when the helicopters are operating at a distance from other rescue resources. The F/W aircraft can be used to fly ahead and positively locate the target. This minimizes the time spent by the helicopter locating the search target. The F/W aircraft also acts as a communications relay platform, monitoring the progress of the evolution and passing information between the low-flying helicopter and the distant command center. More importantly, the F/W aircraft keeps track of the helicopter's position so that it can direct rescue resources to the correct position in the event of a mishap.

C.3.c. Shipboard Operations

The H-65 and the MH-68 are the Coast Guard's shipboard deployable aircraft and operate from all flight deck equipped cutters. The H-60 can operate from 270 foot cutters, WAGB Icebreakers, CGC HEALEY and CGC ALEX HALEY. The H-60 and H-65 helicopters can conduct helicopter in-flight refueling (HIFR) from all suitably equipped cutters and Navy vessels. The HIFR maneuver consists of hovering over the vessel, hoisting aboard the HIFR fueling rig, pressure refueling, and lowering the rig back to the vessel. This evolution involves greater risk than landing and refueling, so it should be used only when warranted. A more thorough discussion of ship-helicopter operations is contained in the Shipboard Helicopter Operational Procedures Manual, COMDTINST 3710.2 (series).

C.4. H-60

The H-60 "Jayhawk" is the Coast Guard's medium range rescue (MRR) aircraft. It is a single-rotor, twin-engine helicopter. The strengths of this airframe include load capacity and range. The aircraft is equipped with a rescue hoist, an external cargo hook, and pylons for carrying external fuel tanks or the night sun searchlight (right pylon). This helicopter has been successfully operated from 270 foot cutters. With the exception of certain air stations that have this requirement, most H-60 pilots do not maintain shipboard landing qualifications.

C.4.a. Crew

The minimum crew consists of two pilots and a flight crew member. A typical SAR crew includes two pilots, a flight mechanic, and a rescue swimmer. In this configuration it is designed to pick up six survivors, although they will not all have seats. Up to six passengers can be carried in seats if the SAR gear is removed and/or fewer crew are aboard. The maximum gross weight is 21,884 pounds. The maximum fuel load is 6,460 pounds, but to have this much fuel, the helicopter must be equipped with three auxiliary tanks on the pylons. Without any fuel, the normal H-60 weighs around 15,000 pounds. This means that an H-60 with maximum fuel and a crew of four must reduce its fuel load to carry additional cargo. The ambient temperature will also influence the takeoff load capacity.

Continued on next page

C.4.b. Performance

The H-60 burns fuel at an approximate rate of 1,200 pounds of fuel per hour. It has a top speed of approximately 180 knots, but time at this speed must be minimized to reduce airframe vibratory loads. Typical cruise speed is around 130 knots. Maximum range airspeed varies, but 127 knots is a rough average. Maximum endurance airspeed is around 70 knots. The maximum range of the H-60 for a point-to-point transit approaches 700 NM. A radius of action of 300 NM, provides for twenty minutes of hovering for hoists, and a twenty-minute fuel reserve upon return. If the object is to stay aloft, an H-60 can fly a maximum endurance profile for approximately seven hours.

C.4.c. Navigation

The H-60 has a fully equipped navigation suite. It consists of GPS integrated with INS, a VOR, a TACAN, an ADF receiver, and a Doppler radar navigation set. The H-60 is the only Coast Guard aircraft with Doppler navigation. This unit determines movement over the ground by detecting the frequency shift as four radar beams bounce off the surface. Navigation inputs are processed through a tactical data processor (TDP). This TDP can generate search patterns from pilot-provided inputs. The H-60 does not have a fully coupled autopilot.

C.4.d. Communications

The communications suite includes two dual multi-band VHF/UHF/FM radios and an HF radio. Radio direction finding capability is also included. Secure communications are available through KY-58 (VINSON) and ANDVT.

C.4.e. Sensors

The RDR-1300C radar is used for small target detection, ground mapping, and weather avoidance. A turret mounted FLIR may be mounted and the FLIR image captured on videotape. Handheld video and photographic equipment is universally carried, but the specific capabilities of this equipment vary by air station. For night operations, all H-60 pilots are qualified to fly wearing NVGs.

C.4.f. Equipment

SAR equipment carried onboard the H-60 includes a rescue basket, a hoist sling, a DMB, MK25 and MK 58, smoke flares, a pump, litter, and the crew's six man life raft. When the optional night sun searchlight is installed, the right external fuel tank must be removed. This results in the loss of approximately 30 minutes of fuel.

C.5. H-65

The H-65 "Dolphin" is the Coast Guard's short-range recovery (SRR) aircraft. This twin engine, single rotor aircraft is fully equipped for instrument flight conditions, but it is prohibited from flying in known icing conditions. The strengths of this airframe include speed, integrated electronics, and flexibility. The H-65 is the most plentiful Coast Guard aircraft and is widely distributed throughout the country. Typical missions include rescue, surveillance, and transportation.

C.5.a. Crew

The minimum crew is a pilot and an air crewman. This size crew is limited to day, visual flight rules operations. A typical SAR crew includes two pilots, an air crewman, and a rescue swimmer. A maximum of eight persons, including the crew, can be carried.

Continued on next page

C.5.b. Performance

The H-65 has a maximum speed of 175 knots, but this can be maintained only in a dive at light gross weights. A typical maximum cruise speed is around 140 knots. Maximum range airspeed varies but 120 KIAS is a rough average. Maximum endurance airspeed is approximately 75 knots. The maximum range of the H-65 for a point-to-point transit approaches 375 NM. A crew of three can fly slightly over 125 NM, hover for twenty minutes for hoists, and return. If the objective is to stay aloft, an H-65 with three crewmen can fly a maximum endurance profile at 75 knots for around three hours and thirty minutes. Adding another pilot and/or a rescue swimmer cuts into the amount of fuel one can carry. The maximum fuel load for the H-65 is just under 2,000 pounds, but this can usually be carried only with a crew of three. Any additional crew or cargo will cut into the fuel load and reduce endurance and range. The typical fuel load one can expect without prior notification is around 1,800 pounds. An average fuel burn of 600 pounds per hour is typical. The power produced by the engines is related to the temperature and pressure altitude. Under adverse conditions, a fully loaded H-65 may not be able to hover safely. In emergency situations, it can dump fuel to reduce total aircraft weight.

C.5.c. Navigation

H-65 navigation configuration consists of GPS, a VOR, a TACAN, and an ADF receiver. Navigation inputs are processed through central Control Display Units (CDUs). The CDUs can generate search patterns from pilot input and the flight director can be coupled to the CDU. This minimizes the attention needed to navigate the aircraft and maximizes search effectiveness.

C.5.d. Communications

The H-65 has excellent communications capabilities. The communications suite includes two dual multi-band VHF/UHF radios, an HF radio, and a VHF-FM radio. Direction finding capability is available on UHF and both VHF bands. A dedicated power source and antenna is available for the quick installation of medical telemetry equipment. Secure communications are available through KY-58 (VINSON), and DES. Secure HF capabilities are limited.

C.5.e. Sensors

The primary sensor is the RDR-1300C radar used for surface search, weather avoidance, and ground mapping. For night operations, all H-65 pilots are qualified to fly wearing NVGs. In addition to photographic and video camera, some air stations use handheld FLIR video cameras to enhance sensor capability.

C.5.f. Equipment

Typical equipment carried onboard the H-65 includes a rescue basket, a hoist sling, a DMB, MK25 smoke flares, and the crew's six man life raft. A litter, a dewatering pump or an SLDMB are not normally carried but can easily be taken if needed.

Section D. Airplanes

D.1. Overview

Using F/W aircraft means one will have other capabilities not normally available from helicopters. These capabilities normally include greater speed, range, and endurance. Airplanes usually have more extensive sensor, navigation and communications capabilities, and they are usually more suitable for cargo and passenger transportation.

D.2. Airports

There are also different planning considerations when using the capabilities of F/W aircraft. Airport facilities are the first thing that must be considered. Is there a suitable (adequate runway and fuel) airport available? Does the particular aircraft require special services, such as customs or maintenance facilities? Can the runway bear the weight of an aircraft such as a fully loaded C-130H or C130J?

D.2.a. Runway

Probably the most critical element at any airport for a F/W aircraft is the runway length. In general, runways that are 5,000 feet in length, dry, and not higher than 1,000 feet above sea level are adequate for all Coast Guard airplanes. If the runway is wet or icy, the runway must be longer. Altitude, temperature, winds, and aircraft weight determine what runway length is required for each model airplane.

D.3. Fuel, Range, and Endurance

It is desirable to have a suitable airport as close as possible to the operating area in order to maximize the amount of fuel available for the operational mission. Contingency planning requires the multi-engine pilot to have sufficient fuel in reserve to be able to land at a suitable airport in case of a loss of one engine. It is normally best to plan a search so the aircraft is creeping in the direction of the suitable airport. As the search progress and the fuel on board the aircraft diminishes, the fuel needed to fly to the suitable airport is also being reduced. How the airplane is configured and flown makes a big difference. It is more efficient for turbine (HU-25) and turboprop (C-130H/J) airplanes to fly at higher altitudes. They can fly faster with less fuel flow per mile at higher altitudes than at sea level. Even at sea level there are choices to be made. Should the airplane fly at "Best Range Speed" to cover more track miles? Or, should it cover less territory and stay airborne a little longer by flying at "Maximum Endurance Speed?" Any identification (ID) passes or operations at lower airspeeds with flaps extended increase fuel usage and further reduce the range of coverage. Transport flights typically are made at high altitudes and contend with the "jet stream" which flows predominately west to east in the northern hemisphere. Jet stream winds of 100 to 200 knots are common. Obviously, this can either degrade or enhance aircraft range depending on the direction of travel and the current position of the jet stream.

Continued on next page

D.4. Aerial Delivery

A SAR ready F/W HC-130 or HU-25 can deliver dewatering pumps, rafts, rescue kits, datum marker buoys (DMBs), self-locating datum marker buoys (SLDMBs), smoke floats, message packets plus other approved items listed in the respective flight manuals. Additionally, anything that can fit inside an approved delivery container can be dropped. (HU-25s are limited to dropping containers no heavier than 90 pounds.) The larger items are dropped with a parachute, and smaller items, including smoke floats and message packets, are dropped free fall. An experienced pilot making an aerial delivery expects an average linear accuracy of 50–100 feet and lateral accuracy of 20–40 feet under light wind conditions. As winds increase above twenty knots, accuracy is much more difficult to gauge.

D.5. C-130H

The C-130H is an all-weather, day and night airlift/airdrop, and surveillance platform. With worldwide use and intercontinental range, the “Hercules” is the world’s most versatile tactical transport aircraft. The Coast Guard uses this airlift capability to support normal operations, emergencies and relief activities, as well as long-range SAR and surveillance. Due to a lack of maneuverability and large size, the C-130H is impractical for harbor patrols. It is more suited for offshore, extended performance missions. For visual searching, the aircraft is equipped with search windows on either side of the fuselage.

D.5.a. Crew

A normal crew of seven includes two pilots, a flight engineer, navigator, radio operator, and two dropmasters (or one loadmaster plus one dropmaster for cargo flights).

D.5.b. Performance

A fully fueled C-130H with no cargo can fly a long-range profile of over 4,000 miles and land with a 1.5-hour fuel reserve. This transit would take approximately 14.5 hours. A similarly loaded aircraft could fly a low level patrol at a maximum range airspeed of approximately 210 knots and cover almost 2,300 track miles while consuming an average 6,000 pounds of fuel per hour. For extended time on scene, a pilot might choose to fly at maximum endurance airspeed, approximately 140 knots, and reduce the fuel consumption to around 4,000 pounds per hour. A typical logistics mission with 35,000 pounds of cargo limits the fuel load to 40,000 pounds before exceeding maximum takeoff weight. This fuel load provides a 2,000-mile range at cruise altitude. The minimum runway length required for takeoff on such a mission would be 4,900 feet. Only 3,400 feet of dry runway would be necessary for the landing.

D.5.c. Facility Requirements

Military airfields are the preferred facilities because they will have available special loading equipment plus excellent fuel and maintenance support. This does not preclude use of civilian fields if necessary. Although, the C-130H can be operated from unimproved surfaces, the runways and taxiways at any airfield for proposed operations should have a single-tandem weight-bearing capacity greater than 155,000 lbs.

D.5.d. Navigation

The aircraft has GPS and INS for long-range navigation. Two VORs, two TACANs, and an LF-ADF round out the navigation suite.

Continued on next page

D.5.e. Communications

Communications radios include two multi-band VHF/UHF/FM units, a FM, VHF, and two HF radios. Secure communications are provided with KY-58 (Vinson), KY-75 (Parkhill), and ANDVT.

D.5.f. Sensors

All Coast Guard C-130Hs are equipped with both APN-215 weather radar and APS-137 ISAR (Inverse Synthetic Aperture Radar). The APS-137 radar controls and displays are located at the navigator's station. 1500 series C-130s can be configured with Side Looking Airborne Radar (SLAR). They are used primarily for International Ice Patrol, and also to detect and map oil spills.

D.5.g. CASPER System

All C-130Hs can be configured in approximately three hours with the CASPER system. This system is comprised of a WESCAM, Model 20TS turret assembly and two operator stations installed on a standard cargo pallet. The turret assembly contains a 3rd generation infrared sensor for low light & nighttime target detection, evaluation and classification and two electro-optical sensors for initial target acquisition and identification if the conditions are favorable. The electro-optical sensors are a wide field of view color camera with a continuous zoom range of 9-162mm and a black and white narrow field of view camera with step zooms of 600mm, 1200mm, 1900mm and 3200mm. The Sensor System Operator (SSO) occupies the left side operator station on the CASPER pallet and controls the sensor turret. The Tactical System Operator (TSO) operates the Airborne Tactical Workstation (ATW) on the right side of the pallet and is responsible for target data management utilizing DOD OASIS software to display target information and ICE software for image capture and transmission.

D.5.h. Passenger and Cargo Information

Up to 70 passengers may be carried aboard an C-130H using palletized airline type seating in the cargo area of the airplane. When this many passengers are being carried, cargo capacity is very limited. For loading cargo, the C-130H has a cargo ramp and door in the tail section. The ramp may be placed in a horizontal mode, which is level with the bed of a truck or a K-loader. The ramp can also be lowered to the ground for loading vehicles and trailers.

D.5.i. Variables

The interior dimensions of the cargo compartment measure 492 inches long by 123 inches wide by 108 inches high. The actual usable width with the dual rail system installed is 108 inches. This dual rail system can be removed, but it is a laborious process. So, if one must transport an extra wide vehicle, for example, alert the supporting air station as early as possible to avoid any delay. Besides interior dimensions, there are other variables that must be taken into account to avoid loading problems or delays. These include but are not limited to: axle height, overhang, floor loading, and weight and balance.

Continued on next page

D.5.j. Pallets

Palletized cargo is the preferred method of transporting bulk supplies or items. This is because pallets are easy to load and unload; there are rollers in the cargo floor. Pallets are also easy to restrain because restraints are built into the dual rail system. Finally, the size and dimension of each pallet make calculating the weight and balance relatively easy. Pallets are made of balsa wood clad in an aluminum skin. Each measures 88 inches by 108 inches and weighs 290 pounds. Up to six pallets can be loaded in an C-130H. Two pallets may be secured together for items larger than one pallet. (Such items require a K-loader for loading/unloading.) If one wants to move equipment as expeditiously as possible, palletize, weigh and mark all cargo before the arrival of the aircraft. Most large Coast Guard stations can provide pallets or help locate some. Also, remember to shrink-wrap any potentially hazardous cargo.

D.5.k. Cargo Limitations

The authoritative source for all military air cargo transport rules is the Air Force Inter-Service Manual 24-204, Preparing Hazardous Material for Military Air Shipments manual.

NOTE

The less stringent requirements contained in Chapter 4 are only for contingency operations and require Commandant (CG-711) approval.

In general, one should be aware of the following requirements:

- Self-propelled machinery carried as cargo, such as vehicles, forklifts, etc., may contain no more than one half tank of fuel. It is critical that no more than one half of the fuel tank be filled. Excess fuel venting in the cargo area threatens the airplane and crew, and it will require an immediate landing.
- Machinery that is not self-propelled, such as generators, pumps, etc., must have empty tanks and all fuel must be purged and the battery must be disconnected. Fuel for such items may be carried separately in approved containers. (See AFMAN 24-204).

There are other requirements, which may preclude carrying passengers with certain cargo unless Commandant (CG-711) grants a waiver. Some cargo items are prohibited from being shipped together. If one does not have a copy of AFMAN 24-204 to use in planning one's load, the air station supporting the airlift will be able to help.

Continued on next page

D.6. HU-25

The HU-25 is the Coast Guard's medium range surveillance (MRS) aircraft. Speed, range and versatility characterize this airframe. This is a military version of the civilian Dassault Falcon 20 airframe equipped with two large search windows to enhance its surveillance and search capabilities. Each HU-25 has a drop hatch through which pumps, rafts, DMBs, smoke markers, message blocks, and other small items can be delivered. The HU-25 is not designed to be a cargo airplane, so it is not equipped with extensive tie down points or an oversized entry. But it is often used to transport relatively small items when time constraints, operational security, or availability rule out commercial shipment. It is an excellent means to transport key individuals to a crisis command center. The HU-25 is also a suitable MEDEVAC aircraft for ambulatory patients and incubators. There are currently three versions of the HU-25: the A, C, and D models, differentiated by the type of mission sensors installed.

D.6.a. HU-25A

D.6.a.(1) Crew

The normal operating crew consists of two pilots, an avionicsman or sensor systems operator, a dropmaster, and an observer. The aircraft can be configured to seat up to nine persons. For transport or logistics missions the crew can be reduced to two pilots and an avionicsman so up to six passengers can be moved.

D.6.a.(2) Performance

Maximum speed at sea level is 350 knots, but normal search speed varies between 180 and 250 knots, as discussed in the next section. At altitudes above 25,000 feet, normal cruise is approximately 410 knots.

D.6.a.(3) Range and Endurance

Under "no wind" conditions, the HU-25A has a range of slightly less than 1,700 nautical miles if the flight is conducted at high altitude. At low altitude, in warmer temperatures, the HU-25 is less fuel efficient. A flight conducted entirely at 1,000 feet under VFR conditions may have a range of between 800 and 900 nautical miles. Range and speed are just some trade-offs involved during a typical mission. The maximum range airspeed for the HU-25A is around 250 knots indicated airspeed (KIAS) and the maximum endurance speed is around 180 KIAS. There are trade-offs with both speeds: a search at 250 KIAS will cover more ground but would have a lower probability of sighting a small object; a search at 180 KIAS would improve detection but cover less area. To fly much slower than 160 KIAS, flaps must be extended, which creates additional drag and further reduces on-scene endurance. The minimum airspeed available is around 125 knots, and it is used when trying to identify small targets or sightings. The HU-25A may operate as low as 100 feet under daylight conditions to identify a vessel. If the goal is to maximize the time the aircraft remains on scene to act as a communications relay platform, for instance, or to await arrival of a surface asset, slowing to maximum endurance airspeed (approximately 180 knots) is necessary. Climbing to a higher altitude also increases on-scene time.

Continued on next page

D.6.a.(4) Fuel

The HU-25 maximum fuel load is 10,431 pounds. The typical load one can expect without prior notification is around 8,000 to 8,500 pounds. This is a good general purpose fuel load, which permits the aircraft to take off under high temperature conditions. It also serves to keep the aircraft weight light enough to make a normal landing shortly after takeoff if necessary. The fuel system has a feature that senses when the wing tanks are full and closes several valves to prevent spillage. This can cause problems if one wants to add fuel to an airplane that already has significant fuel still in the wing tanks. If the wing sensors are wet, the valves will not open and refueling will not be possible until fuel is drained from the wings and the sensors are dry. Like many types of aircraft, the HU-25 cannot always take off with a full fuel load, even with prior notice. Hot temperatures, higher elevations, obstacles near the airport, runway lengths shorter than approximately 7000 feet, or a combination of these variables can limit the aircraft's takeoff weight.

D.6.a.(5) Navigation

The HU-25 uses an area navigation system (RNAV) computer to provide precise navigation capability. The RNAV computer receives, filters, and combines navigation data from the inertial navigation computer and the Global Positioning System (GPS) unit. The pilots enter the desired flight plan information, including search pattern data, into the RNAV. The output of the RNAV gives the pilots lateral and vertical flight guidance information. By coupling this information with the autopilot, pilots can monitor navigation information more efficiently and devote more time to scanning outside the aircraft. The HU-25 also has dual very high frequency omnidirectional range (VOR) receivers, dual distance measuring equipment (DME) receivers, a single tactical air navigation (TACAN) receiver and an ADF receiver for making instrument approaches under poor weather conditions to airports. It has direction finder (DF) capability on UHF, VHF-AM, and VHF-FM to help it locate distress signals.

D.6.a.(6)
Communications

Six radios make up the communications suite on the HU-25A. Two high frequency (HF) radios are used for long-range communications. Secure communications on HF advanced narrow band digital voice terminal (ANDVT) are available. A single ultra high frequency (UHF) radio is available with secure voice capability. A single ultra high frequency (UHF) radio is available and is equipped with KY-58 (VINSON) secure voice capability. A single DES-capable VHF-FM radio is also available.

D.6.a.(7) Sensors

Air stations routinely equip HU-25As with 35mm cameras and video camcorders for documentation of observations. NVGs may be used by scanners to maintain visual contact with a target at night, but they are not very effective for night searching. HU-25As are equipped with APS-127 airborne radar for searching and weather avoidance.

D.6.b. HU-25C

The HU-25C was originally developed for the air intercept mission. It is configured very similar to the HU-25A. Any differences are noted.

D.6.b.(1) Crew

Same as configuration for HU-25A.

Continued on next page

D.6.b.(2) Performance	Same as A model.
D.6.b.(3) Range and Endurance	In its normal SAR configuration, the HU-25C has a marginally shorter range and less endurance due to the increased weight of the radar, FLIR, camera, sensor turret and tactical work station.
D.6.b.(4) Fuel	The increased weight of the mission sensors reduces the maximum fuel load of the HU-25C to approximately 9500 pounds of fuel.
D.6.b.(5) Navigation	Same as A model.
D.6.b.(6) Communications	Same as A model, except that the HU-25C has, COTHEN, and MILSATCOM.
D.6.b.(7) Sensors	The HU-25C uses the AN/APG-66V(2) digital Doppler radar with air-to-air, surface search, weather detection, and ground mapping capabilities. Additionally, the aircraft is equipped with a 16-DSI sensor turret, housing a third generation FLIR and a day color surveillance camera. The FLIR provides a video presentation based on infrared or heat signature, which can be useful for determining surface and airborne contact type and monitoring activity during both day and night. While an infrared sensor generally cannot read names and numbers, under certain conditions there may be a heat differential that makes this possible. The day camera has a 40-degree field of view, making it useful for daytime detection and identification of contacts. Both the FLIR and color camera have an excellent zoom feature, enabling the aircraft to standoff from contacts at a sizeable distance. All three sensors—the APG-66, FLIR, and camera are fully integrated and can be commanded to point at the same position as any of the other sensors. While the APG-66 is designed as an air intercept radar to locate and track suspect aircraft, it has a very effective surface search mode that, working as a package with the FLIR and camera, provides a very powerful surface patrol and surveillance capability.
D.6.b.(8) Tactical Work Station	As part of the sensor upgrade in 2002, the HU-25C has a tactical work station that integrates the three sensors discussed in D.5.b.(2)(g), provides a geographic map display, can simultaneously record any two of the sensors on a super-VHS video cassette, allows the operator to store, retrieve, manipulate and transmit sensor images, and enables transmission and receipt of text messages with other units which are suitable equipped.
D.6.c. HU-25D	
D.6.c.(1) Crew	Same as configuration for HU-25A.
D.6.c.(2) Performance	Same as A model.

Continued on next page

D.6.c.(3) Range and Endurance	In its normal SAR configuration, the HU-25D has a slightly shorter range and less endurance than the A model due to the increased weight of the FLIR, camera, sensor turret, and tactical work station.
D.6.c.(4) Fuel	The increased weight of the mission sensors reduces the maximum fuel load of the HU-25D to approximately 9500 pounds of fuel.
D.6.c.(5) Navigation	Same as A model.
D.6.c.(6) Communications	Same as A model, except that the HU-25D has MILSATCOM.
D.6.c.(7) Sensors	The HU-25D uses the same FLIR and day color camera as the HU-25C, however the D model has the APS-143V(3) radar installed. The APS-143 is a tri-mode radar, possessing normal surface detection mode, ISAR or contact "imaging" mode, and weather display mode. This radar can also simultaneously track up to 30 contacts, with the ability to dead reckon those contacts that are no longer within the radar's field of view.
D.6.c.(8) Tactical Work Station	Same functionalities as the HU-25C.
D.7. C-37A	A single C-37A aircraft is assigned to Coast Guard Air Station Washington at Ronald Reagan National Airport. Its mission is to provide transportation for Coast Guard and DHS officials who have bona fide communications or security needs or exceptional scheduling requirements. It may also be used for other official transportation of passengers or small cargo if such use is cost effective or no aviation service is reasonably available to fulfill the traveler's requirements. The C-37A (a military version of the Gulfstream V business jet) is capable of nonstop, transcontinental flight to anywhere in the world. To use the C-37A in support of Coast Guard missions, direct requests to Air Station Washington. Outside normal business hours, make such requests to Flag Plot. Final approval for C-37A missions must be obtained from the Commandant (CG-711) before the missions can be executed.
D.7.a. Crew	The normal flight crew is two pilots and two crew members. Each day one complete flight crew is ready to be airborne within three hours of notification. Naturally, more complex missions, such as those requiring international clearances, may require more than three hours of planning. When they are deployed away from the air station, the crew carries cellular telephones so they can receive immediate notification of schedule changes.
D.7.b. Performance	The aircraft usually cruises at a true airspeed of 488 knots while maintaining altitudes up to flight level 510 (approximately 51,000 feet). It is considered to have a maximum range of 6,500 nautical miles, or a maximum flight endurance of approximately 14 hours.

Continued on next page

D.7.c. Passengers and Cargo

The C-37A carries 12 passengers in a normal seating configuration. Cargo capacity is limited to items that can fit through the main entrance or baggage doors. The maximum payload (including passengers and cargo) is approximately 6,500 pounds.

D.7.d. Navigation

The C-37A has a state of the art navigation system centered around dual GPS receivers. System components include dual VOR receivers, a TACAN receiver, GPWS and HUD with EVS, all integrated into the flight management system making the aircraft RVSM and CAT II certified.

D.7.e. Communications

The C-37A can provide worldwide secure voice and secure data communications. The suite includes HF, UHF, VHF-AM, and VHF-FM radios. Furthermore, communications can be established worldwide using both military and commercial SATCOM capabilities; they can be accomplished using STU III encryption; and they can be conducted in the air by means of a flight phone. A Coast Guard standard workstation with fax modem capabilities is another feature of the communications suite.

D.7.f. Sensors

The C-37A has no sensor capabilities.

D.7.g. Equipment

The C-37A has an auxiliary power unit (APU) for ground electrical power and air conditioning, which makes it suitable to act as a self-supporting, transportable communications, command, and control center. Additionally, the C-37A is equipped with a galley and lavatory facilities.

D.8. C-143A

A single C-143A aircraft is assigned to Coast Guard Air Station Washington. It serves the Medium Range Command and Control Mission, similar to the C-37A. Its mission is to provide transportation for Coast Guard and DHS officials who have bona fide communication or security needs or exceptional scheduling requirements. It may also be used for other official transportation of passengers or small cargo if such use is cost effective or no aviation service is reasonably available to fulfill the traveler's requirements. The C-143A (a military version of the Bombardier Challenger 604 business jet) is capable of nonstop coast to coast US travel and overseas travel with planned fuel stops. To use the C-143A in support of Coast Guard missions, direct requests to Air Station Washington. Outside normal business hours, make such requests to Flag Plot. Final approval for C-143A missions must be obtained from the Commandant (CG-711) before the missions can be executed.

D.8.a. Crew

The normal flight crew is two pilots and two crew members. Each day one complete flight crew is ready to be airborne within three hours of notification. Naturally, more complex missions, such as those requiring international clearances, may require more than three hours of planning. When they are deployed away from the air station, the crew carries cellular telephones with limited digital text capability so they can receive immediate notification of schedule changes.

Continued on next page

D.8.b. Performance

The aircraft usually cruises at a true airspeed of 430 knots TAS while maintaining altitudes up to flight level 410 (approximately 41,000 feet). It has a maximum range of 3,500 nautical miles, or a flight endurance of 7.5 hours.

D.8.c. Passengers and Cargo

The C-143A carries 11 passengers in a normal seating configuration. Cargo capacity is limited to items that can fit through the main entrance or baggage doors. The maximum payload (including passengers and cargo) is approximately 2,425 pounds.

D.8.d. Navigation

The C-143A has a Rockwell Collins Pro Line 4 Flight Management System. The navigation system includes dual GPS receivers, dual VOR, and single TACAN. The aircraft is certified for worldwide RVSM, U.S. DRVSM, BRNAV/RNP-5, RNP-10 and PRNAV operations.

D.8.e. Communications

The C-143A provides worldwide secure voice and secure data communications. The suite includes HF, UHF and VHF-AM radios. Furthermore, communications can be established to the aircraft telephone system worldwide using commercial SATCOM capabilities with STE III encryption capability. Additionally, worldwide secure facsimile capability is available via STE-compatible systems. Non-secure facsimile capability is available in the continental United States.

D.8.f. Sensors

The C-143A has no sensor capabilities other than those required for IFR flight.

D.8.g. Equipment

The C-143A has an auxiliary power unit (APU) for ground electrical power and air conditioning, which makes it suitable to act as a self-supporting, transportable communications, command, and control center. Additionally, the C-143A is equipped with galley and lavatory facilities.

D.9. C-130J

The C-130J is an all-weather, day and night airlift and surveillance platform. It possesses worldwide capability and intercontinental range. Compared to older C-130Hs, the C-130J climbs faster and higher, flies farther at a higher cruise speed, and takes off and lands in a shorter distance. The Coast Guard uses this aircraft solely for airlift capabilities until its missionization is complete.

D.9.a. Crew

The C-130J can operate with two pilots and one basic aircrew member however normal missions will require an additional loadmaster.

D.9.b. Performance

A fully loaded C-130J can carry 42,000 pounds of cargo. With 35,000 pounds, it has a range of 1600 nautical miles. The C-130J cruises at 320 knots but is capable of 350 knots.

D.9.c. Facility Requirements

The C-130J possesses the same facility requirements as the C-130H.

D.9.d. Navigation

The C-130J uses an embedded GPS/INS for long-range navigation. It also possesses VORs, TACANs, and ADFs for additional navigation.

Continued on next page

D.9.e. Communications	The C-130J can communicate on VHF AM/FM, UHF, HF, and SATCOM.
D.9.f. Sensors	The C-130J is equipped with an APN-241 weather and ground mapping radar.
D.9.g. Passenger and Cargo Information	Up to 60 passengers may be carried aboard a C-130J using palletized airline type seating in the cargo area of the aircraft. The maximum number of passengers is 92. When this many passengers are being carried, cargo capacity is very limited. For loading cargo, the C-130J has a cargo ramp and door in the tail section. The ramp may be placed in a horizontal mode, which is level with the bed of a truck or a K-loader. The ramp can also be lowered to the ground for loading vehicles and trailers.
D.9.h. Variables	Same as the C-130H.
D.9.i. Pallets	Same as the C-130H.
D.9.j. Cargo Limitations	Same as the C-130H.

This Page Intentionally Left Blank

Section A. Department of Homeland Security Aviation Management and Safety

A.1. Introduction

This appendix consists of relevant excerpts from DHS Management Directive 0020.1 (series), incorporated verbatim into this manual, as well as guidelines for Senior Federal Travelers.

Section B. Excerpts from DHS Management Directive 0020.1 (series)

Section I. Purpose

Section I. Purpose

To establish the framework for an efficient, effective, secure, and safe aviation program for the Department of Homeland Security (DHS) and its contractor aviation operations.

Section II. Scope

Cancellation

None

II. Scope

This directive applies to all DHS Organizational Elements (OE) (as defined in MD 0010.1 "Management Directives System and DHS Announcements") and their contractors involved with the management, operation, and/or maintenance of aircraft and related services, and OEs that obtain Commercial Aviation Services (CAS) (Para 3, Definitions), except as indicated in exclusions in paragraph II.B, below.

II.b. Exclusions

The management and safety requirements in paragraph VI of this Directive do not apply to:

1. Aircraft owned by the Armed Forces, or operated on behalf of the U.S. Government by Armed Forces personnel, as set forth in Section 40125(c) of Title 49, United States Code,
 2. Aircraft owned and operated by other government agencies when used by DHS OEs during emergencies where loss of life or property is imminent, and the manager in charge approves the operation and certifies that this is the only reasonable option,
 3. Aircraft owned and operated by another government agency in a non-emergency if:
 - a. The requirements of 41 CFR, Part 102.33.140, are established in a governing document (e.g., a memorandum of agreement or memorandum of understanding), and
 - b. The government agency meets the standards established by the OE's field element, and
-

Figure C-1. (Sheet 1 of 22)

Continued on next page

Section I. Scope; Continued**II.b. Exclusions,**
Continued

c. The aviation program manager of the OE requesting support approves the operation, or

d. The flights are scheduled airline operations conducted by U.S. air carriers.

Section III. Authority**III**

This directive is governed by numerous national policy circulars, regulations and directives such as:

A. 5 CFR, § 2635, "Standards of Conduct for Employees of the Executive Branch."

B. 14 CFR, Chapter 1, § 21, 43, 61, 65, 91, 119, 135.117, 121.571, "Federal Aviation Regulations (FAR)."

C. 41 CFR § 101-37, "Federal Property Management Regulations (FPMR)."

D. 41 CFR § 102-33, "Federal Management Regulation (FMR)."

E. 49 CFR, § 820,830, "National Transportation Safety Board."

F. 49 CFR, § 40125, "Qualification for Public Aircraft Status."

G. Federal Aviation Administration Advisory Circular on Government Aircraft (AC 1-1 dated 1995).

H. National Transportation Safety Board (NTSB) document "Federal Plan for Aviation Accidents Involving Aircraft Operated by or Chartered by Federal Agencies", Appendix F (NTSB/SPC-99-04).

I. National Archives and Records Administration Transmittal #9.

J. OMB Circular A-76, "Performance of Commercial Activities."

K. OMB Circular A-123, "Internal Control Systems."

L. OMB Circular A-126 (Revised), dated 5-22-92, "Improving the Management and Use of Government Aircraft."

Figure C-1. (Sheet 2 of 22)

Continued on next page

Section IV. Definitions

Actual Cost	All costs associated with the use and operation of a DHS or other Government aircraft, in accordance with Attachment A of OMB Circular A-126.
Crew Member	A person assigned to operate or assist in operating an aircraft. Who performs duties directly related to the operation of the aircraft (e.g., pilots, co-pilots, flight engineers, navigators) or duties assisting in operation of the aircraft (e.g., flight directors, crew chiefs, electronics technicians, mechanics). If a crewmember is onboard for the purpose of travel, (i.e., being transported from point to point) he/she must be authorized to travel in accordance with rules in 41 CFR 301-10.260 through 301-10.266 and 41 CFR 301-70.800 through 301-70.903.
Federal Aircraft	An aircraft that an Executive Branch agency owns, bails, or borrows for any length of time.
Full Coach Fare	The price of a coach fare available to the general public on a scheduled air carrier between the day that the travel was planned and the day the travel occurred.
Government Aircraft	An aircraft that is operated for the exclusive use of an executive agency and is a Federal aircraft, which an executive agency owns (i.e., holds title to) or borrows for any length of time under a bailment or equivalent loan agreement, or is a Commercial aircraft hired as commercial aviation services (CAS).
Governmental Function	The term "governmental function" means an activity undertaken by a government, such as national defense, intelligence missions, firefighting, search and rescue, law enforcement (including transport of prisoners, detainees, and illegal aliens), aeronautical research, or biological or geological resource management.
Mission Requirements	Activities that constitute the discharge of the Department's official responsibilities. Travel aboard Government aircraft for purposes of attending meetings, site visits, conferences, or making speeches are examples of travel that are not mission requirements.
<u>National Capital Region (NCR)</u>	Per Executive Order 13150 definition, consists of the District of Columbia; Montgomery, Prince George's, and Frederick Counties in Maryland; Arlington, Fairfax, Loudon, and Prince William Counties in Virginia; and cities now or hereafter existing in Maryland or Virginia within the geographic area bounded by the outer boundaries of the combined area of the counties listed above.
Official Travel	Travel that falls into of these categories: mission requirements, required use transportation, or other transportation required for the conduct of agency business.

Figure C-1. (Sheet 3 of 22)

Continued on next page

Section IV. Definitions; Continued

Official Transportation	Travel that falls into of these categories: mission requirements, required use transportation, or other transportation required for the conduct of agency business.
Passengers	In relation to use of Government aircraft, a passenger is any person who flies onboard a Government aircraft, but who is not a crewmember or qualified non-crewmember.
Qualified Non-Crew Member	A person flying on a Government aircraft whose skills or expertise are required to perform, or are associated with performing the non-travel related Governmental function for which the aircraft is being operated (qualified non-crewmembers may be researchers, law enforcement agents, firefighters, agricultural engineers, biologists, etc.) If a qualified non-crewmember is onboard for the purpose of travel (i.e., being transported from point to point), in addition to performing his/her duties related to the non-travel related Governmental function for which the aircraft is being operated (e.g., when a scientist conducts an experiment at the same time he/she is also on the aircraft for the purpose of traveling from point to point), he/she must be authorized to travel in accordance with rules in 41 CFR parts 301-10 and 301-70.
Required Use	Travel of a DHS official or employee for whom the use of Government aircraft is required/directed to meet pre-determined, bona fide communications or security needs of the Agency, or exceptional scheduling requirements. An example of a bona fide communications requirement is having to maintain continuous, 24-hour, secure communications with the traveler. Bona fide security requirements include, but are not limited to, life threatening circumstances. Exceptional scheduling requirements include emergencies and other operational considerations, which make the use of scheduled commercial transportation unacceptable.
Senior Federal Officials	An individual who is: (1) paid according to the Executive Schedule established by 5 U.S.C. 53, Subchapter II, including Presidential appointees who are confirmed by the Senate; (2) employed in the U.S. Government's Senior Executive Service or an equivalent "senior" service; (3) is a civilian employee of the Executive Office of the President; (4) appointed by the President to a position under Section 105(a)(2)(A), (B), or (C) of Title 3 U.S.C., or by the Vice President to a position under Section 106(a)(1)(A), (B), or (C) of Title 3 U.S.C.; (5) a contractor working under contract with an Executive agency, and who is paid at a rate equal to, or more than, the minimum rate for the Senior Executive Service, and has senior executive responsibilities.

Figure C-1. (Sheet 4 of 22)

Continued on next page

Section V. Responsibilities

Section V. Responsibilities	
A. Chief of Administrative Services	Shall coordinate with the Office of Management and Budget (OMB) and the General Services Administration (GSA) to develop DHS-wide aircraft guidance, and develop and oversee the implementation of DHS aviation policies and procedures. The Chief of Administrative Services also has oversight responsibilities for the life cycle management of aviation assets and compliance with OMB Circular A-123, "Internal Control Systems", regarding reports of weaknesses in aircraft programs.
B. Assistant Secretary for Legislative Affairs	Shall review and approve requests from congressional travelers to use DHS aircraft. However, travel aboard DHS aircraft (other than Coast Guard aircraft) by other than crew members and qualified non-crew members can only be approved for aircraft that have a current certificate of airworthiness issued by the Federal Aviation Administration.
C. Chief Financial Officer (CFO)	Shall review DHS planned aircraft acquisitions and other aircraft related actions as part of the budgetary process. The CFO is also responsible for evaluating and submitting to OMB, as part of the next Departmental budget submission, a copy of the results of each OE's biennial review of the continuing need/justification for all of their aircraft, and the cost effectiveness of their aircraft operations in accordance with the requirements of OMB Circular A-76.
D. Heads of Department OEs that conduct aviation operations within their programs	<ol style="list-style-type: none"> 1. Develop and implement effective aviation operations, airworthiness, security, and safety programs that meet the requirements of this Directive. 2. Ensure that clear accountability for management and use of DHS aircraft is established at a senior management level within the OE. 3. Ensure that internal policies and procedures for procuring aircraft and related services are consistent with the requirements of OMB Circulars A-76 and A-126. 4. Ensure that aircraft programs comply with the internal control requirements of OMB Circular A-123, and that aircraft programs are in the OE's Management Control Plan.

Figure C-1. (Sheet 5 of 22)

Continued on next page

Section V. Responsibilities: Continued

D. Heads of Department OEs that conduct aviation operations within their programs;
Continued

5. Ensure that cooperation is provided to GSA through participation in interagency working groups and other means to assist in developing aircraft management policies and standards, as required by OMB Circular A-126, and collecting aircraft information and other requirements of FMR 41 CFR Part 102-33.

6. Ensure that all request to GSA for a waiver to exchange/sale an aircraft are processed through the Chief of Administrative Services.

7. Appoint an Aviation Program Manager, or Aviation Safety Officer, or both, depending upon the scope of operations, number of aviation operations conducted, and/or number and type of aircraft assigned.

8. Designate an Aviation Manager to serve as a member on the DHS Aviation Management Council and Aviation Commodity Council.

E. The Administrative Services Office Aviation Program Manager will:

1. Implement DHS' aviation management and safety policies and establish the OE's standards for an aviation program that will ensure an effective, safe, secure, and cost efficient operation.

2. Provide direction to aviation contractors regarding required aviation services. This includes the types of missions that are required and the regulations, policies, and standards that contractors are to follow.

3. Serve as a member on the DHS Aviation Commodity Council and Aviation Management Council.

4. Review, in collaboration with appropriate DHS offices, the use of aviation assets to ensure the safe and efficient management of the Department's aviation services and resources.

5. Provide technical assistance and guidance, and be the focal point for the collection, retention, evaluation, and dissemination of aviation information.

Figure C-1. (Sheet 6 of 22)

Continued on next page

Section VI. Policies & Procedures

Section VI. Policies & Procedures

A. Policy

- A.1. Except for certain airspace rules that apply to all aircraft [reference FAA Act of 1958, Title 49 United States Code (U.S.C.), Subtitle VII], the Federal Aviation Administration (FAA) has no legal jurisdiction over “public aircraft” operations. Therefore, for federally owned or operated aircraft DHS must be self-regulating [refer to 49 U.S.C. 410125(a) 37]. However, when a federally owned aircraft is carrying personnel not essential to the performance of a governmental function for which the aircraft was dispatched, or when an aircraft operation is conducted for compensation from outside of the Federal Treasury, then for that operation the aircraft is considered a “civil” aircraft and is required to comply with the applicable sections of the Federal Aviation Regulations [Title 14 Code of Federal Regulations (CFR) Chapter 1, Parts 21, 43, 61, 65, 91, 119] and DHS policy.
- A.2. DHS OEs that use Commercial Aviation Services (CAS) exclusively for the performance of governmental missions or passenger operations, must require the vendor or contractor to comply with the civil aviation standards [Title 14 CFR, Chapter 1 and 49 CFR Chapter XII] applicable to the type of operations conducted while in service to the Department or its contractor.
- A.3. Aircraft owned or operated by the Department, other than aircraft operations excluded by paragraph II.B, must have a Federal Aviation Administration (FAA) accepted or FAA-approved Continued Airworthiness Maintenance and Inspection Program [Title 14 CFR, Chapter 1, Part 91.409, paragraph g], applicable to the type and model aircraft operated, before entering service with the Department.
- A.4. DHS Organization Element (OEs) will prepare and maintain passenger manifests for all flights. A copy of the manifest will be kept for 2 fiscal years following the end of the year during which the flight occurred, in accordance with National Archives and Records Administration Transmittal 9. As a minimum, the manifest will consist of the information contained in Attachment 2.
-

Figure C-1. (Sheet 7 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

- A.5. OE policies for the use of DHS aircraft operating in support of DHS programs shall be consistent with this directive, and shall be developed and implemented by the OE holding and operating the DHS aircraft. Use of any DHS aircraft for transporting passengers and/or cargo shall be governed by this directive.
- A.6. DHS OEs must ensure that aviation operations perform weight and balance calculations to ensure that aircraft are within the manufacturers' and FAA- or military-established weight and balance limitations for each operation, flight, or mission profile for which the aircraft is to be operated.
- A.7. DHS OEs must ensure that passenger safety briefings fulfill the requirements set forth in 14 CFR Part 135.117 or 121.571, and those established in the National Transportation Safety Board (NTSB) document "Federal Plan for Aviation Accidents Involving Aircraft Operated by or Chartered by Federal Agencies", Appendix F (NTSB/SPC-99-04); (See Attachment 3.)
- A.8. The use of company and private aircraft by Senior Federal Officials and political appointees must be coordinated through the Office of Asset Management (OAM) for DHS General Counsel's approval, to ensure compliance with 5 CFR, Part 2635.

B. Procedures

- B.1. Reporting Requirements The following reporting requirements are established to ensure Federal aircraft and CAS are effectively used, program needs are met, and accurate information is obtained to report accountability to appropriate oversight entities:
- B.1.a. Each OE operating, using, or sponsoring the use of Government aircraft must appoint a responsible individual to maintain the required records and reports of aircraft use and the other required reports established by this Directive. This appointment must be in writing, must constitute a significant duty, and the name and appointment order must be on record with the Management Directorate, Aviation Program Office,
- B.1.b. Every use of Government aircraft requires quarterly reporting of relevant information to the Federal Aviation Interactive Reporting System (FAIRS), IAW the Federal Management Regulations or successor regulations promulgated by GSA.

Figure C-1. (Sheet 8 of 22)*Continued on next page*

Section VI. Policies & Procedures; Continued

B.1.c. Each OE shall submit to the OAM semi-annual reports on non-mission travel on Government aircraft by senior Federal officials, dependents, and non-Federal travelers and mission travel on Government aircraft by senior Federal officials. This information is required for consolidation and reporting to GSA and OMB in the Senior Federal Travel Report.

B.1.d. Reports on classified trips shall not be reported to GSA, but must be maintained by the OE using the aircraft and be available for review as authorized. The report will include the following information:

- (1) Agency/Organization.
- (2) Name of the traveler.
- (3) Number of flights.
- (4) Traveler status (e.g., Senior Federal Official, Senior Executive Branch employee, Non-Federal employee, etc.)

B.2. Accepted Aircraft Operators

The Department occasionally relies on the aircraft support of other Federal, State, and local government agencies. Verification of the operator's compliance with government aviation safety standards, except for the exclusions in paragraph II.B, above, is required before personnel can travel or conduct missions on other Government aircraft, including those owned or operated by foreign governments.

Figure C-1. (Sheet 9 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.3. Foreign Air Carriers

B.3.a.

The use of foreign aircraft, whether Government, scheduled commercial airline, or CAS provider, presents special problems for DHS travelers. Foreign operators may not meet the high standards of safety and oversight required of operators in the United States. While most nations, including the United States, subscribe to the standards of the International Civil Aviation Organization (ICAO), compliance by foreign air carriers is dependent on the ability and expertise of the governments of the nations wherein they reside to provide proper oversight. FAA conducts monitoring and reporting of a foreign country's ability to properly oversee aviation standards. DHS accepts FAA's International Aviation Safety Assessment (IASA) program determination of a foreign government's ability to oversee its flagged air carriers as meeting the ICAO standards and therefore, their acceptability for DHS use. To be fully acceptable under these criteria, the flagging ("host") country must be rated as "level 1" by IASA. Individual foreign airlines that demonstrate an unusually high accident history may be deemed unacceptable for passenger travel by OAM, even though their host ("flagging") countries meet the oversight criteria.

B.3.b.

Foreign CAS providers may not be subject to the same oversight as scheduled commercial carriers in the same country. Military aircraft of foreign nations are not subject to the ICAO standards

B.4. Contractors

B.4.a.

All DHS aviation contractors and sub-contractors, at every level, are responsible for compliance with this directive.

B.4.b.

Contractors (and/or sub-contractors) that only use CAS in support of DHS program requirements must comply with the regulations and guidance in Title 14 CFR, Chapter 1 and 49 CFR, Chapter XII, applicable to the type of operations conducted while in service to the Department.

B.4.c.

Each vendor or contractor that provides CAS must have a FAA accepted or FAA-approved Continued Airworthiness Maintenance and Inspection Program [Title 14 CFR, Chapter 1, Part 91.409 (g)], applicable to the type(s) and model(s) aircraft operated, if operating former military aircraft - other than aircraft owned by the U.S. Armed Forces or operated on behalf of the U.S. Government by U. S. Armed Forces personnel, as defined by United States Code (U.S.C.) Title 10.

Figure C-1. (Sheet 10 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.4.d.	The CAS provider must give passenger safety briefings [Title 14 CFR, Chapter 1, Part 135 or 121] that fulfill the requirements established in the NTSB document, “Federal Plan for Aviation Accidents Involving Aircraft Operated by or Chartered by Federal Agencies”, Appendix F (NTSB/SPC-99-04). (See Attachment # 3.)
B.4.e.	Must report metrics requirements established by DHS, to ensure CAS are effectively used, program needs are met, and accurate information is obtained to provide accountability to appropriate oversight entities.
B.5. Management and Use of DHS Aircraft	
B.5.a.	The management and use of DHS aircraft will comply with OMB Circular A-126, “Improving the Management and Use of Government Aircraft”. The following policies apply to the management and use of DHS aircraft:
B.5.a.1.	Federal aircraft in service to DHS must be operated and maintained in accordance with Departmental policy, the applicable parts of 14 CFR, Chapter I; 49 CFR Chapter XII; and/or equivalent international standards appropriate for the operations and type of aircraft in service.
B.5.a.2.	DHS aircraft shall only be used for official purposes.
B.5.a.3.	The number and size of DHS aircraft acquired by an OE and the capacity of those aircraft to carry passengers and cargo shall not exceed the level necessary to meet the OE’s mission requirements.
B.5.a.4.	OEs shall use their aircraft in the most cost-effective way to meet their requirements.
B.5.a.5.	Qualified flight crews shall accomplish all DHS aircraft operations in airworthy aircraft. All practical and necessary steps shall be taken in aircraft operations to avoid loss of life, personal injury, property loss, or mission failure.
B.5.a.6.	All applicable requirements of OMB Circular A-126 must be met, including all requirements related to approving the use of DHS aircraft, for: Official transportation, required use transportation, transportation of senior Federal officials and/or members of their families, and non-Federal travelers.
B.5.a.7.	All applicable requirements of OMB Circular A-76 shall be met prior to purchasing, leasing, or otherwise acquiring DHS aircraft and related services, to ensure that these aircraft and services cannot be obtained from, and operated by, the private sector more cost effectively.

Figure C-1. (Sheet 11 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

-
- B.5.a.8. The continuing need for all DHS aircraft, and the cost effectiveness of DHS aircraft operations, shall be reviewed in accordance with the requirements of OMB Circular A-76. Any DHS aircraft not fully justified by these reviews shall be reported as excess and released for disposition.
-
- B.5.a.9. Commercial transportation shall be used for passengers and/or cargo to the maximum extent practicable, consistent with effectively and economically meeting mission requirements. Use of DHS aircraft for transporting passengers and/or cargo, including such use on a Space Available basis, shall be in accordance with the provisions of this MD.
-
- B.5.a.10. DHS aircraft may not be used for political activities, except where incidental political activities add no additional costs and where no additional stops are required. Reimbursement with respect to incidental political activity of the traveler shall be made in accordance with OMB Circular A-126 and other applicable guidance.
-

B.6. Use of DHS Aircraft for Mission Requirements

-
- B.6.a. DHS aircraft are used to support defined DHS programs that must be accomplished to carry out statutory responsibilities.
-
- B.6.b. Approval Authority for Mission Requirements Flights
- (1) All mission requirements flights on DHS aircraft must be approved in accordance with procedures established by the OE holding and operating the aircraft. In no case shall the approving authority be below the level of USCG Captain 0-6 (or Commanding Officer or Duty Officer of a unit with aircraft), GS/GM-14, or other equivalent level in an OE.
 - (2) Officials ranked below the DHS senior level officials identified in subparagraph b. (1), above, or other equivalent positions in an OE, shall not approve their own mission flights.
 - (3) On an exception basis, persons below the levels in subparagraphs b. (1)&(2), above, may approve their own mission flights when prior approval is not practicable (e.g., unscheduled flights). However, such flights shall also be approved by a higher approval authority as soon as possible after the flight.
 - (4) Whenever a DHS aircraft, used to fulfill a mission requirement, is also used for transportation of passengers and/or cargo, such transportation is subject to all approval and other applicable requirements of this directive relating to the transportation of passengers and/or cargo.
-

Figure C-1. (Sheet 12 of 22)*Continued on next page*

Section VI. Policies & Procedures; Continued

B.7. Use of DHS Aircraft for Transportation of Passengers and/or Cargo

- B.7.a. Commercial airline (including charter) or aircraft service shall be used for transporting passengers and/or cargo to the maximum extent practicable, consistent with effectively and economically meeting mission requirements. DHS aircraft, however, may be used to transport passengers and/or cargo in accordance with this directive.
- B.7.b. OEs must prepare implementing directives for passenger and or cargo flights IAW this MD, which shall specify in detail the positions authorized to approve passenger and/or cargo flights. Further delegation of this approval authority is not permitted.
- B.7.c. Cost Comparisons
- (1) When the use of a DHS aircraft for the primary purpose of transporting passengers and/or cargo is considered, an advance, written cost comparison shall be performed unless otherwise stated in this MD. (See Attachment 1, Cost Comparisons with Commercial Transportation.) The OE requesting use of the aircraft is responsible for performing the cost comparison.
- (2) Required Use Transportation. Cost comparisons are not required for "Required Use" transportation, provided:
- (a) A determination is made under paragraph e.1., below, that Required Use Transportation is appropriate; and
 - (b) The flight record contains adequate written justification clearly showing the reasons for use of DHS aircraft under these conditions; and
 - (c) The flight record shows the approximate flight hour cost of the particular aircraft.
-

Figure C-1. (Sheet 13 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.d. Certification Requirement for Certain Space Available Transportation	41 CFR, Part 301-70, requires a special certification requirement whenever a DHS aircraft, used to fulfill a mission requirement, is also used to transport senior Federal officials, members of their families, or other non-Federal travelers on a "Space Available" basis (except as authorized under 10 U.S.C. 4744 (military Space Available program) and regulations implementing that statute.) The certifying official shall be the same individual within the OE who is the approving authority for the mission flight. This individual must certify, in writing, prior to the flight that the aircraft is scheduled to perform a bona fide mission activity; that the minimum mission requirements have not been exceeded in order to transport such "Space Available" travelers; and such "Space Available" use does not require a larger aircraft than was needed for the original official purpose. Falsification of this certification, or other portions of the flight record, could result in criminal prosecution under 18 U.S.C. 1001, or other appropriate disciplinary action. In special emergency situations, an after-the fact, written certification by the OE is permitted. The original of the written certification shall be included as part of the official flight records.
B.7.e. Transportation of Passengers/ Approval Requirements	The following policies and procedures apply when DHS aircraft are used for official transportation. The specific approval requirements for each passenger being transported are determined by the type of passenger (e.g., a senior Federal official) and the basis of the transportation that will be provided (e.g., Required Use.)
B.7.e.1 Required Use Transportation	
B.7.e.1.a	Required Use transportation may be requested by certain DHS officials. Once Required Use transportation is approved for a DHS official, then use of the DHS aircraft is also appropriate for staff members who are accompanying the DHS official.
B.7.e.1.b Approval Requirements	All required use transportation on DHS aircraft must be approved IAW the following guidelines.

Figure C-1. (Sheet 14 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.e.1.b.i.	<p>Trip-by-trip approval must be approved in advance, and in writing, from the OE’s senior legal official or principal deputy legal official. In special emergency situations, an after-the-fact written approval by an OE is permitted. If the DHS aircraft will be used for Required Use transportation of an official from outside DHS, that official must seek written approval from his/her agency’s senior legal official or principal deputy legal official. That written approval must become a part of the flight records.</p>
B7.e.1.b.ii	<p>Blanket approval in lieu of a trip-by-trip approval, the Secretary, DHS, may determine that all transportation for a DHS official, or transportation in specified categories, qualifies as Required Use. Such determinations are made only upon a written finding that the ongoing communications or security requirements of the official clearly dictate that all official transportation needs qualify as required use transportation. The requesting official must submit a memorandum through the General Counsel to the Secretary, providing written justification why his/her ongoing communications or security requirements dictate the need for Required Use transportation.</p>
<p>B.7.e.1.c.Reimbursement for Required Use Transportation</p>	
B.7.e.1.c.i.	<p>When Required Use transportation also includes Space Available transportation, other than for the conduct of official Government business, the Government shall be reimbursed in accordance with paragraph h.2., below.</p>
B.7.e.1.c.ii.	<p>When Required Use transportation also involves incidental political activity, the Government shall be reimbursed in accordance with OMB Circular A-126 and other applicable guidance.</p>
B.7.e.1.c. Reporting Requirements	<p>Required Use transportation for senior Federal officials, members of the families of such senior Federal officials, and non-Federal travelers that is non-mission travel must be reported in accordance with paragraph VI B. 1.</p>

Figure C-1. (Sheet 15 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.f. Transportation Not Considered to Meet Mission Requirements or Deemed Required Use Travel	Official transportation on DHS aircraft that is not considered mission related or Required Use, may be approved only if such transportation is cost effective, or if no commercial airline (including charter) or commercial aircraft service is reasonably available to effectively fulfill the OEs requirement (i.e., able to meet the traveler's departure and arrival requirements within a 24-hour period, unless the traveler demonstrates that extraordinary circumstances require a shorter period.)
B.7.f.1 Approval Requirements	Any use of DHS aircraft that does not meet mission requirements or is Required Use travel must be approved in writing. When applicable, such transportation must be documented on an official travel authorization. Except as provided in paragraph (2) below, such transportation must be approved by a designated official at least one organizational level above the person(s) traveling. The following paragraphs provide minimum approval levels for specific categories of travelers:
B.7.f.1.a.	Transporting passengers originating from the National Capitol Region (NCR) requires approval by the Vice Commandant, USCG, or equivalent position in other OEs
B.7.f.1.b.	Transporting passengers originating from outside the NCR requires an approval authority, established by the OE, no lower than one level below the approval level in subparagraph (a), above.
B.7.f.2 Special Approval Requirements	Use of DHS aircraft to transport certain categories of people must be approved, in advance and in writing. Such approvals may be issued only on a trip-by-trip basis and must be signed by the OE's senior legal official or principal legal deputy. In special emergency situations, an after-the-fact written approval by the OE is permitted, but becomes a part of the official flight records. These categories are:
	<ul style="list-style-type: none"> (a) Senior Federal officials. (b) Family members of senior Federal officials. (c) Non-Federal travelers.

Figure C-1. (Sheet 16 of 22)*Continued on next page*

Section VI. Policies & Procedures; Continued

B.7.g. Space Available Travel in Conjunction with Mission Requirements	When DHS aircraft are performing mission requirements, there may be an opportunity for Space Available transportation. The need for Space Available transportation shall not serve as the basis for establishing mission requirements. Space Available transportation must be under conditions where the aircraft has been scheduled to perform a bona fide mission activity and the minimum mission requirements have not been exceeded. Space Available transportation must also be certified in accordance with paragraph VI B. 7. d., whenever a DHS aircraft is used to transport senior Federal officials, members of their families, or other non-Federal travelers.
CG term is Secondary Purpose of Mission	
B.7.g.1 Approval Requirements.	Space Available transportation in conjunction with mission flights of DHS aircraft must be approved and documented on an official travel authorization. Except as provided in paragraph (2), below, such transportation must be approved at least one organizational level above the person(s) traveling. Also, the applicable approval authority shall be no lower than:
B.7.g.1.a When transporting passengers originating from the NCR	The USCG Assistant Commandants, CBP Assistant Commissioners, or equivalent positions in an OE.
B.7.g.1.b When Transporting passengers originating from outside the NCR	The approval authority shall be established by the OE, and shall be no lower than one level below the approval level in subparagraph (a), above.

Figure C-1. (Sheet 17 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.g.2 Special Approval Requirements	<p>(a) When the following categories of people are transported in a Space Available category on a mission flight, such transportation must be approved in advance and in writing:</p> <ul style="list-style-type: none"> i. Senior Federal officials. ii. Members of their families. iii. Non-Federal travelers. <p>(b) Travel by individuals identified in paragraphs I through iii, above, can only be approved by the OE General Counsel or Deputy General Counsel. Approvals must be obtained on a trip-by-trip basis. However, in special emergency situations an after the-fact written approval is permitted. These approvals must become a part of the official flight record.</p>
B.7.h Space Available Transportation	
B.7.h.1	<p>(1) Travelers may not use DHS aircraft for Space Available travel unless:</p> <ul style="list-style-type: none"> (a) The aircraft is already scheduled for use for an official purpose, and (b) Such Space Available use does not require a larger aircraft than needed for the official purpose, and (c) Such Space Available use results only in minor additional cost to the Government, and (d) Reimbursement is provided as set forth in subparagraph (2), below. If Space Available travel is to be authorized it should be authorized on a first come, first-serve basis. To do otherwise is to expose the Department to avoidable, adverse commentary and future statutory limitations.

Figure C-1. (Sheet 18 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.h.2 Reimbursement for Space Available Transportation	<p>For Space Available transportation, other than for the conduct of official Government business, whether on mission or other flights, the Government shall be reimbursed at the full coach fare except:</p> <p>(a) As authorized under 10 U.S.C. 4744 and regulations implementing the statute.</p> <p>(b) Civilian employees and their dependents in remote locations (i.e., locations not reasonably accessible to regularly scheduled commercial airline service) specifically identified in the OE's implementing directive.</p>
B.7.i Congressional Transportation	<p>All requests for transportation on DHS aircraft for Members of Congress, their staffs, spouses and/or dependents shall be reviewed and approved by the Assistant Secretary for Legislative Affairs. If an OE receives a request for such travel, the request shall be promptly forwarded to the Assistant Secretary for Legislative Affairs for review and approval.</p>
B.7.j Non-Official Travelers	<p>Transporting spouses, dependents, and other non-official travelers aboard DHS aircraft is generally prohibited. Official transportation of such individuals (including the DHS senior level officials' spouses) is permitted only if unquestionably in the best interest of the Federal Government (e.g., under circumstances in which the spouse of a DHS senior level official is accompanying that official on a mission in which the spouse is actually to participate, when such transportation is deemed in the national interest, or is desirable because of a diplomatic benefit to the country.) Spouses and dependents may also be transported on DHS aircraft when they are in an official travel status, e.g., permanent change of station travel. Space Available transportation is permitted when authorized under 10 U.S.C. 4744, and regulations implementing that statute; or by civilian employees and their dependents in remote locations in accordance with paragraph (1) below; or when such transportation is approved in accordance with this MD and reimbursement is made in accordance with paragraph (3), below.</p>
B.7.j.1 Remote Locations	<p>Transporting DHS officials/employees and their families to and from remote locations (i.e., locations not reasonably accessible by regularly scheduled commercial airline service) for reassignment, medical attention, or other legitimate purposes, is permitted only with proper approval. The remote locations must be specifically identified in the OE's implementing directive.</p>

Figure C-1. (Sheet 19 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.j.2 Approval Authority	Recurring classes of passengers approved as eligible for Space Available transportation shall be identified in the USCG, CBP, or other OE implementing directives. For any travel that involves spouses, dependents, and other non-official travelers (except for blanket approval of recurring situations in remote locations and recurring classes of passengers specifically identified in the USCG, CBP, or other OE implementing directives), the approval authority must not be lower than the USCG Vice Commandant, the CBP Deputy, or other equivalent position in the OE. However, if such transportation involves senior Federal officials, members of their families, or non-Federal travelers, the approval of the OE senior legal official or principal deputy legal official is required.
B.7.j.3 Reimbursement	When non-official travelers are transported on DHS aircraft on a Space Available basis for other than the conduct of official Government business, whether on mission flights or other flights, the Government shall be reimbursed at the full coach fare.
B.7.k Documentation of Aircraft Use, Retention of Records, and Special Reporting Requirements.	
B.7.k.1. Justification Documentation.	A full, detailed, written justification shall be included in the Aircraft Use Record for each flight of a DHS aircraft clearly showing why the aircraft was used. Whenever a DHS aircraft, used to fulfill a mission requirement, is also used to transport senior Federal officials, members of their families, or other non-Federal travelers on a "Space Available" basis (except as authorized under 10 U.S.C. 4744 and regulations implementing that statute), there must be a written certification statement in accordance with paragraph VI B.7.d., above. If the DHS aircraft actually used was not the most cost-effective aircraft, the reason(s) for the use shall be documented in the flight records and be readily available for audit. Vague or ambiguous justifications shall not be used when transporting passengers or cargo. Justifications such as "official business", or "official transportation", etc., are insufficient, by themselves, to support the determination that the DHS aircraft was used for official purposes.

Figure C-1. (Sheet 20 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.k.2. Record Content.	All uses of DHS aircraft must be documented and this documentation retained as part of the official flight records. Falsification of the certification statement or other portions of the flight record could result in criminal prosecution under 18 U.S.C. 1001, or appropriate disciplinary action. The USCG, CBP, and other OEs shall ensure that their official flight records (and/or attachments to these records) have the capability to allow the entry of the information required by this paragraph.
B.7.k.3. Minimum Requirements.	Records of use of DHS aircraft shall include, at a minimum, specific flight details applicable to the particular flight, such as: Tail number of the plane used; the type of aircraft used; dates and times of arrival and departure; number of hours flown; point of origin; en route stops; destinations; names and status of all passengers; justification and approval for any Space Available passengers and official travelers; type of cargo; title, position, name(s), and signature(s) of the authorized individual(s) approving the flight and/or passengers; name(s) of the pilot(s) and flight crew members; a full, detailed, 10 MD # 0020.1 written justification clearly showing the purpose(s) of the flight; and the original certification statement for Space Available transportation required under paragraph VI B. 7.d.
B.7.k.4. Additional Requirements.	<p>The following information, if applicable, shall also be included in the flight record as justification for the flight.</p> <p>(a) The flight record shall contain adequate written justification clearly showing the reason(s) for using DHS aircraft under either "Required Use" travel or travel when commercial airlines or air service is not reasonably available to effectively fulfill the transportation requirements. Further, the flight record shall also show approximate flight hour costs of the particular aircraft and mission.</p> <p>(b) Cost Comparisons. When DHS aircraft are used for the primary purpose of transportation (except as provided for in subparagraph (1) above, the specific results of the cost comparison between the use of commercial aircraft and use of DHS aircraft must be included in the records</p>

Figure C-1. (Sheet 21 of 22)

Continued on next page

Section VI. Policies & Procedures; Continued

B.7.k.5. Exceeding Minimum Mission Requirements.	Pertinent data shall be contained in the record to show that (or determine if) minimum mission requirements were not exceeded (other than minor deviations resulting from the requirements of a particular flight). If minimum mission requirements were exceeded (other than minor deviations discussed above), justification for this occurrence shall also be contained in the flight records. NOTE: Minimum mission requirements may not be exceeded in order to carry Space Available passengers who are senior Federal officials, members of their families, or non-Federal travelers.
B.7.k.6. Retention of Records.	Records of Use for DHS aircraft shall be retained for a minimum of two years in accordance with the National Archives and Records Administration Transmittal #9. Additionally, flight hours shall be accumulated on an annual basis for each DHS aircraft by purpose of flight, and such information shall be retained for a minimum of three years.

Figure C-1. (Sheet 22 of 22)

Section C. Attachment 1: Cost Comparisons with Commercial Transportation

C.1. General

DHS aircraft may be used for official transportation of passengers and/or cargo when such use is cost effective based on a cost comparison with use of commercial transportation. Except as provided elsewhere in this MD, DHS aircraft shall be used for transportation only when the variable cost of using a DHS aircraft is not more than the cost of using commercial airline (including charter) or aircraft service.

C.2. Required Use Transportation

Cost comparisons are not required when DHS aircraft are used for Required Use transportation in accordance with this MD. The flight records shall contain adequate written justification showing clearly the reasons for use of DHS aircraft under these conditions. Further, the flight record shall also show approximate flight hour costs of the particular aircraft.

C.3. Mission Requirements Secondary Purpose of Transportation

Cost comparisons are not required whenever DHS aircraft are used for mission requirements/secondary purpose of transportation of passengers and/or cargo since such use would, in effect, be a cost savings.

C.4. Transportation Not to Meet Mission Requirements or Required Use Transportation

Cost comparisons shall be performed on all transportation in this category, except use of DHS aircraft when no commercial airline (including charter) or aircraft service is reasonably available (i.e., able to meet the traveler's departure and/or arrival requirements within a 24 hour period, unless the traveler demonstrates that extraordinary circumstances require a shorter period) to effectively fulfill the OE's requirement. (In such cases, however, the flight record shall show approximate flight hour costs of the particular aircraft.) Cost comparisons are to be performed for each use of DHS aircraft for transportation that does not meet mission requirements or Required Use transportation in accordance with paragraph VI B.7.c., of this MD. All cost comparison analyses and justifications for use of DHS aircraft for the primary purpose of transportation of passengers and/or cargo shall be included as part of the aircraft use records which are to be maintained in accordance with this MD. The following criteria shall be considered in cost comparisons for use of DHS aircraft for transportation.

C.4.a. Passengers

C.4.a.(1)

Cost comparisons shall be made using commercial transportation cost appropriate to the travel. The cost of using commercial airline or aircraft services for the purpose of justifying use of DHS aircraft must be the current Government contract air fare or price, or the lowest fare or price known to be available for the trip(s) in question. (When the exact itinerary is unknown, the highest contract air fare will be used.)

Continued on next page

C.4.a.(2)

 Cost comparisons may take into consideration such travel related expenses as excess baggage, ground transportation, and subsistence costs (per diem or actual expenses). The value of an individual's lost work time may be considered in the calculation. For purposes of a cost comparison, the value of lost work time shall be calculated for all DHS officials/employees in an official travel status as follows:

Value of lost = Gross hourly cost (including fringe benefits) work time times the number of hours lost if commercial transportation is used.

C.4.a.(3)

 When travelers from other Federal agencies are transported on DHS aircraft on a Space Available basis for official Government business, to participate in the activity that serves as the basis for the DHS transportation requirement, these Federal travelers may be included in the cost comparison calculation.

C.4.a.(4)

 Cost comparisons shall use the variable flight hour cost for DHS aircraft developed by the OE. These costs shall include all of the applicable variable cost elements contained in OMB Circular A-126, Attachment B, Standard Aircraft Program Cost Element Definitions.

C.4.a.(5)

 As a guide in performing proper cost comparisons, a self explanatory cost comparison worksheet for passenger transportation and a cost comparison analysis format are provided as part of this attachment.

C.4.b. Cargo

 Cost comparisons shall be made between the variable cost of using a DHS aircraft and the cost of using commercial airline (including charter) or aircraft service that could effectively fulfill the cargo transportation requirement.

DHS aircraft may be used for the transportation of cargo whenever: (1) the variable cost of using a DHS aircraft is not more than the cost of using commercial airline (including charter) or aircraft service, or (2) commercial airline (including charter) or aircraft service could not fulfill effectively the cargo transportation requirement.

Cost comparisons shall use the variable flight hour costs for DHS aircraft developed by the OE. These costs shall include all of the applicable variable cost elements contained in OMB Circular A-126, Attachment B, Standard Aircraft Program Cost Element Definitions.

There is no format for cost comparisons for the primary purpose of transportation of cargo. The record of the cost comparison shall show each of the following:

C.4.b.(4)[a]

 The cost of using commercial transportation.

C.4.b.(4)[b]

 The cost of using DHS aircraft

Continued on next page

C.4.b.(4)[c]	The difference between the two options (savings or cost overrun).
C.4.b.(4)[d]	The justification of why the DHS aircraft was used (i.e., a cost savings or an explanation of the other overriding factor for such use).
C.5. Cost Comparisons for Government Aircraft	For OEs to make the cost comparisons necessary to justify the use of Government aircraft, the OE must compare the actual cost of using a Government aircraft to the cost of using commercial aircraft (including charter) or airline service. The actual cost of using a Government aircraft is either:
C.5.a.	The amount that the OE will be charged by the organization that provides the aircraft.
C.5.b.	If the OE operates its own aircraft, the variable cost of using the aircraft.
C.5.c.	If the OE is not charged for the use of an aircraft owned by another OE, the variable cost of using the aircraft as reported to it by the OE holding and operating the aircraft.
C.6. Cost Comparison and Recurring Usage	In accordance with OMB Circular A-126, Attachment A, OEs that propose to use their aircraft to support recurring transportation between locations are encouraged to develop standard trip cost justification schedules. These schedules would summarize the projected costs of using one or more specific types of their aircraft to travel between selected locations as compared to using commercial aircraft (including charter) or airline service between those locations. Comparative costs for varying passenger loads would also be shown. OEs that choose to use this approach would be able to see at a glance the minimum number of official travelers needed to justify the use of a particular aircraft, or aircraft type, for a trip between locations on the schedule. OEs that are not able to use such schedules are required to do a cost comparison on a case-by-case basis.

Continued on next page

Attachment 1: Cost Comparisons with Commercial Transportation, Continued

COST COMPARISON ANALYSIS FORMAT

COST COMPARISON ANALYSIS

- 1. Total Cost of Commercial Transportation
(from Worksheet Part C.6.) \$ _____
 - 2. Total Cost of Using DHS Aircraft
(from Worksheet Part B.2-d-) \$ _____
 - 3. Difference (1. - 2.) = \$ _____
- POSITIVE DIFFERENCE = SAVINGS TO GOVERNMENT: USE OF DHS AIRCRAFT JUSTIFIED ON ECONOMICS
- NEGATIVE DIFFERENCE = COST OVERRUN: DO NOT USE DHS AIRCRAFT ABSENT OTHER OVERRIDING FACTORS

JUSTIFICATION/ADDITIONAL INFORMATION

- 1. _____ Justified on economics based on the above cost comparison analysis.
- 2. _____ Transportation requirement could not be fulfilled effectively because noncommercial airline (including charter) or aircraft service was not reasonably available (this overrides the cost comparison analysis showing that commercial transportation was more expensive; justify in 5. below)
- 3. _____ Transportation performed for another agency under a reimbursable agreement.
- 4. _____ Transportation of spouse/dependent/other nonofficial traveler involved. (Justify in 5. below.)
- 5. Justification: _____

SIGNATURE

DATE

When cost comparisons are required for the use of DHS aircraft, the Cost Comparison Analysis Format becomes part of the official flight record.

Figure C-2. (Sheet 1 of 5)

Continued on next page

Attachment 1: Cost Comparisons with Commercial Transportation, Continued

COST COMPARISON WORKSHEET FOR PASSENGER TRANSPORTATION

PART A. GENERAL INFORMATION

1. Purpose of Travel: _____

2. Date(s) of Travel: _____

3. Travel Itinerary (include dates and desired times of arrival/departure): _____

4. Special Requirements: _____

Figure C-2. (Sheet 2 of 5)

Continued on next page

Attachment 1: Cost Comparisons with Commercial Transportation, Continued

COST COMPARISON WORKSHEET FOR PASSENGER TRANSPORTATION

PART A. General Information—Continued.

5. Information on Official Passengers:

<u>Rank/Grade</u>	<u>Title/Position</u>	<u>Name</u>	<u>Round-Trip</u>	<u>One Way</u>

6. Information on Non-official Passengers:

<u>Name</u>	<u>Title/Position</u>	<u>Company/Organization</u>	<u>Round-Trip</u>	<u>One Way</u>

Figure C-2. (Sheet 3 of 5)

Continued on next page

Attachment 1: Cost Comparisons with Commercial Transportation, Continued

COST COMPARISON WORKSHEET FOR PASSENGER TRANSPORTATION

PART B. ESTIMATED COSTS OF USING DHS AIRCRAFT

1. Aircraft Information:

a. Departmental Element: _____

b. Recommended Aircraft:

<u>Type</u>	<u>Speed</u>	<u>Passenger Capacity</u>
_____	_____	_____

c. Non-availability of Aircraft (explain): _____

2. Estimated Costs (use only the applicable variable cost elements):

a. Number of Flight Hours = _____ Hours*

b. Variable Cost Related to Flight Hours

(1) Crew Costs Variable/Hour	\$ _____
(2) Maintenance Cost Variable/Hour	\$ _____
(3) Overhaul Cost/Hour	\$ _____
(4) Fuel and Fluids/Hour	\$ _____
(5) Aircraft Lease/Rent variable/Hour	\$ _____
TOTAL ((1)+(2)+(3)+(4)+(5))	\$ _____
(# of Flight Hours) =	\$ _____

c. Other Variable Costs Not Related to Flight Hours**

(1) Staging Costs	\$ _____
(2) Crew Per Diem	\$ _____
(3) Landing and Tie-Down Fees	\$ _____
(4) Miscellaneous (Food, etc.)	\$ _____
TOTAL ((1)+(2)+(3)+(4)) =	\$ _____

d. Total Cost of Using DHS Aircraft
 (2.b. + 2.c.) =

\$ _____

* In calculating the total number of flight hours for use in the cost comparison, additional flight hours resulting from flight legs to preposition the aircraft and return it to its home base must be included in the calculation.

** In calculating other variable costs not related to flight hours, the additional costs resulting from flight legs to preposition the aircraft and return it to its home base must be included in the calculation.

Figure C-2. (Sheet 4 of 5)

Continued on next page

Attachment 1: Cost Comparisons with Commercial Transportation, Continued

COST COMPARISON WORKSHEET FOR PASSENGER TRANSPORTATION

PART C. ESTIMATED COMMERCIAL COSTS

Note: Commercial costs are to be determined using contract air fares absent other overriding factors. Specific details on possible flight arrangements may be provided as an attachment to this Part C.

1. Commercial cost/passenger \$ _____ (x) Number of official travelers (DHS and other Federal Agency)
 _____ = Total Commercial Air Fare \$ _____
2. Per Diem (if avoided by using DHS aircraft) \$ _____
3. Excess baggage costs (total) \$ _____
4. Group transportation/rental car/other transportation (if avoided by using DHS aircraft) \$ _____
5. Total value of lost work time (VLWT)* \$ _____
6. Total cost of commercial transportation (1. + 2. + 3. + 4. + 5.) \$ _____

*Note: Value of lost work time (VLWT) = gross hourly cost (including fringe benefits) times the number of hours lost if commercial transportation is used.

VLWT Calculations (official DHS passengers only):

Rank/ Grade	Gross Hourly Cost	Number of Passengers	Extended Cost
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
_____	_____/hr	x _____	= \$ _____
Total Gross Hourly Cost =			\$ _____

VLWT/hour \$ _____ (x) # of Hours Lost _____ = \$ _____ Total VLWT
 (enter in 5. above)

Figure C-2. (Sheet 5 of 5)

Section D. Attachment 2: Standard Personnel Salaries and Estimated Hourly Variable Cost Rates for Selected DHS Aircraft Flight Hours

D.1. Web Site

Standard personnel salaries and variable cost rates for the use of Coast Guard Aircraft change constantly. For the most up-to-date information the best source is the Commandant (CG-832) web site, located at CG Central.

Section A. Fitness of Aircrew Personnel

A.1. General

Certain adverse physiological or psychological factors can be responsible for causing mishaps, both in the air and on the ground. These adverse factors include: fatigue, improper diet, poor physical condition, improper or excessive use of tobacco, alcohol or drugs, minor illness, mental or emotional stresses, and insufficient or irregular sleep. Although such factors probably cannot be completely eliminated in aviation personnel, it is important that the existence of these factors be recognized and that appropriate action is taken to minimize their effects. Particular emphasis should be placed on the needs of deployed aircrews that are operating in unfamiliar environments and often on unusual cycles.

A.2. Command Action

The following are command responsibilities:

- Observing, in letter and spirit, the maximum utilization factors for aircrews prescribed in this manual.
- Arranging watch duties so that crews on alert duty are able to sleep with a minimum of interruption from telephone calls, administrative matters, machinery noises and other disturbances.
- Ensuring that all aircrew personnel clearly understand the effects of fatigue, distraction, emotional stress, improper diet, overindulgence, and insufficient sleep; advising aircrew personnel of their duty and responsibility to bring any such conditions which might affect safety of flight to the attention of the commanding officer, and to request grounding, if necessary, until such factors are corrected.
- The Coast Guard monitors and controls crew mission days, flight time, and other fatigue related factors as a risk management tool. Crew utilization standards are not designed to hinder operational commanders in mission planning or execution. Scheduling and rest guidance should be viewed as long term risk management and loss control parameters designed to minimize injury and damage and to preserve limited capital and personnel resources for future operational use.
- Familiarity with policies, responsibilities and guidelines set forth in Coast Guard Aviation Medicine Manual, COMDTINST M6410.3.

A.3. Factors Affecting Fitness of Aircrew Personnel

A.3.a. General

Training and equipment can only be effective if flying personnel are fit to fly. Inadequate nourishment, lack of sleep, excesses which lower efficiency, inattention to minor illness, distraction, and preoccupation are incompatible with flight safety. A professional approach to flying requires a thorough knowledge of one's individual and crew limitations.

A.3.b. Responsibilities

Individual aircrew personnel are responsible for maintaining a high level of mental and physical fitness.

Continued on next page

A.3.c. Specific Factors

The following factors directly affect aircrew personnel fitness.

A.3.c.(1) Sleep and Rest

Human factor studies have identified fatigue as a significant factor impacting aircrew judgment and operational performance. Fatigue is alleviated and mental alertness is restored by proper sleep. Irregular and insufficient sleep patterns can create both immediate and long term (or chronic) fatigue. Noise, poor climate control, bright light, excitement, worry, or any other condition that is not conducive to restfulness will diminish the benefits of sleep. While the optimum amount of sleep varies widely among individuals, the normal standard for flying personnel is eight hours in every 24-hour period. Factors such as excessive fatigue, illness, and emotional stress tend to increase this standard. Mishap experience and studies indicate that any decrease in a flight crew member's ability to sleep will impact normal performance functions and increases the likelihood of error. Since influence of increased error becomes particularly significant during operations at night and in poor weather, flights, watch standing requirements, and collateral duties should be assigned with due regard to providing adequate crew rest for such assignments.

NOTE

Studies have demonstrated that sleep obtained during daylight hours may not be as effective and restorative as nocturnal sleep.

A.3.c.(2) Reverse Cycle Operations

Traditionally, the Coast Guard has structured crew rest limits based on the air station Search and Rescue ready crew model. Within this paradigm, reverse cycle operations are limited to isolated late night SAR cases, with the crew allowed restorative sleep immediately upon relief. Typically, relief crews respond to tasking the following night if needed. Transitioning to night vision goggles, increased red-zone missions (0300–sunrise), sensor packages such as CASPER, and demands for “round the clock” deployed law enforcement response require a safe protocol that satisfies operational requirements yet accounts for the body's strong natural desire for rest during hours of darkness. Particularly alarming is human factors science that indicates increased mental and physical impairment the third night of reverse cycle operations.

A.3.c.(2)[a] Reverse Cycle Operations – Planning Considerations

Operational Commanders must evaluate the probable mission benefits against increased reverse cycle operations fatigue risk. While night vision goggles may enhance detection capability, they offer little identification capability. Similarly, reverse cycle operations should be planned during lunar cycles that best enhance night vision goggle capabilities. Any safe reverse cycle operations require suitably isolated crew rest facilities. The shipboard environment provides many challenges for uninterrupted rest during daylight. Rotation of the entire cutter schedule (not just the AVDET) appears to foster a better (but not ideal) rest environment for cutter and AVDET personnel. Crews deploying to ashore forward operating bases should carefully consider rest facilities and deploy with any required equipment (i.e. black out curtains, provisions for food preparation when restaurants are closed, etc.). Crew berthing should be arranged by similar mission scheduling to minimize disruptions.

Continued on next page

Cutter requirements for daylight boardings concurrent with reverse cycle flight operations may quickly “burnout” the cutter crew and AVDET, yielding elevated risks for both evolutions. Safe cutter-based helicopter maintenance during reverse cycle operations should be considered. Since the aircrew “work day” may be during hours of darkness, aircraft spotting and routine maintenance may be completed on a dark deck, with flashlights, perched on ladders/check stands/aloft on the aircraft. It may be advantageous for some AVDET members to remain day oriented to complete aircraft maintenance in daylight. Any test flight will require a re-adaptation to daytime.

Augmenting of officer and enlisted AVDET members is highly recommended to allow continued asset deployment and proper crew rotation/rest (i.e., two nights on/one night off).

Shipboard experience indicates best results when the entire cutter shifts routines. Most effective is a 1400-1500 Reveille and 0400 Taps.

NOTE

Shifting of the ship's clock is the recommended avenue to accomplish this routine shift.

This provides balance of sufficient daylight for aircraft and cutter maintenance and training and desired nighttime operations.

A.3.c.(2)[b] Reverse Cycle Operations – Personal Coping Strategies

Seek daylight exposure after awakening from sleep at approximately 1500, but not before. Doing so will help the body assume a 1500 sunrise.

During prescribed wakeful periods after sunset, remain within a brightly lit space (with levels equivalent to a suitably lighted shop/hangar space) to initiate “daylight” response. Ensure necessary night vision adaptation period.

Once night adapted, maintain a consistent sleep period, beginning just prior to or soon after sunrise (to minimize exposure to light) and ending about 1500.

Consistent, reliable scheduling is one of the best tools for fostering safe reverse cycle operations. Be consistent with meal periods, reflecting a “breakfast” orientation upon awakening in mid-afternoon and appropriately sequenced meals to follow.

Once night adapted, when possible maintain consistent flight mission times or within a specific operational window (e.g., 2200 to 0400). Minimize flights between 0300 to sunrise or 0600 whichever comes first. The 0300 to sunrise period is a crew endurance “red-zone” period where alertness is at a low point, even under night adaptation.

If a supplemented crew is provided, assure consistent wakefulness during “off” time. Given the fragile nature of night adaptation, easily reversed by a single 24 hours of daylight activity, crews must be diligent to stay in a night schedule when adapted, regardless of duty scheduling. Environmental factors such as collateral duty requirements, family demands, off-duty demands, etc. must adhere to the night schedule for the member to remain safely adapted.

When possible, reduce the period of sustained wakefulness (time from sleep until present) before flights to below eight hours. That is encourage crews to nap one to two hours before missions if their period of sustained wakefulness

Continued on next page

is approaching eight hours. Maintain a seven to eight hour sleep period. Use naps in the evening to reduce sleep loss, if daily sleep duration is less than seven hours.

Consider any disruption in the continuity of sleep (phone call, beeper call, noisy environment, etc.) as a “bad night” and make arrangements to nap during the day, and sleep-in at the earliest opportunity to compensate for the sleep loss.

Sleep-in the day after a sleep loss or a “bad night” (less than seven hours or a disrupted sleep period makes for a “bad night”). Consider that personnel are more susceptible to develop chronic fatigue when working nights, even if an adaptation protocol is in place.

Do not delay compensating for sleep loss or a “bad night.” You will incur sleep debt and experience fatigue at unexpected times of the work period (in this case nighttime).

Optimize the sleep environment by reducing light, noise, and controlling temperature. Sleep is most restorative if taken in a dark, quiet, and cool/well ventilated environment. Consider sleeping arrangements where occupants have similar sleep schedules to minimize disruptions from activity in the berthing areas.

Consider that susceptibility to make wrong decisions and to experience spatial disorientation is exacerbated by sleep loss.

Factor alertness into each mission risk analysis. Try to avoid missions during the red zone (0300-sunrise). If you must operate in the red zone maintain mission duration as low as possible. Use crew resource management and maintain a lively chat in the cockpit at all times. **DO NOT ALLOW PERIODS OF SILENCE** during the red zone, or you WILL zone.

A.3.c.(2)[c] Reverse
Cycle Operations –
Suggested Operational
Scheduling

No Reverse Cycle Operational Doctrine is suited to all mission scenarios. The suggested protocols below have been tested and proven an effective template for some reverse cycle operations. The first template assumes a short period (two nights maximum) “pulse” into night operations with the crew remaining daytime oriented. The second template assumes a dedicated effort to night adapt for a prolonged reverse cycle operation. Both protocols assume isolated crew rest facilities.

Short-Term Reverse Cycle Operations: Repeated nights of scheduled or unscheduled operational launches can be especially fatiguing to a crew, particularly if the crew is remaining in a “Daytime” orientation due to the short period of night operations. Unless the crew has night adapted by adhering to the “Long-Term Reverse Cycle Operations” protocol below and reached “Night 4 and Following,” the following guidance is suggested:

Night 1: Crew Utilization limits listed in Chapter 3, paragraph C.3 of this manual apply. If the crew retires after the sortie, seek to gain as much uninterrupted sleep as possible. If the sortie was during the “red zone” (0300-sunrise), the crew should be provided a minimum of 10 hours crew rest after mission completion before subsequent tasking. Upon awakening, observe daylight to activate normal physiological cycles. Nap if possible in late afternoon. Seek to limit the period of sustained wakefulness prior to

Continued on next page

the next sortie to less than eight hours. If possible, retire at normal bedtime prior to "Night 2" responses.

Night 2: If a launch occurs 0000-sunrise the second night, the crew should be limited to 4.0 hours of cutter based flight operations (including training flights). Crew Utilization limits listed in Chapter 3, paragraph C.3 of this manual apply to shore based operations. If the crew retires after the sortie, seek to gain as much uninterrupted sleep as possible. If the sortie was during the "red zone" (0300-sunrise), the crew should be provided a minimum of 10 hours crew rest after mission completion before subsequent tasking. Upon awakening, observe daylight to activate normal physiological cycles. Nap as possible in late afternoon. Seek to limit period of sustained wakefulness prior to next sortie to less than 8 hours.

Night 3: The crew should not respond to launch tasking from 0000-sunrise. The crew must attain 24 hours of crew rest before assuming alert status from 0000-sunrise (returning to "Night 1" above if necessary).

Long-Term Reverse Cycle Operations: This protocol assumes prolonged employment of a single crew into the period of 0000-sunrise. The sequence integrates the maximum daily shift of the body's clock of 90 minutes. As such, requires a minimum of four nights to potentially shift the body's clock from 0000 to 0600 bedtime. Once begun, the crew must consistently adhere to night adaptation strategies to facilitate nighttime orientation. Specifically, seek to retire prior to sunrise and sleep until 1300-1500. Due to the detrimental effect daylight has on reorienting the body's cycles, avoid sunlight exposure until after 1500. The sequence is as follows:

Night 1: A maximum of 4.0 hours of cutter based flight operations. The Crew Utilization limits of Chapter 3, paragraph C.3 of this manual apply to shore based operations. If operation of crew and aircraft occurred earlier in the day (i.e., transport to forward operating base or cutter), assure the Crew Utilization limits of Chapter 3, paragraph C.3 of this manual are not exceeded. Leverage napping to reduce sustained wakefulness to less than eight hours before nighttime sortie. Upon final landing, the crew is placed in Reverse Cycle Crew Rest Status until 1600 the following day.

Night 2: A maximum of four hours of cutter based flight operations. The Crew Utilization limits of Chapter 3, paragraph C.3 of this manual apply to shore based operations. Upon final landing, the crew is placed in Reverse Cycle Crew Rest Status until 1600 the following day.

Night 3: No flight operations. Crew maintains Reverse Cycle measures during "off day/night." Coverage of AOR to be provided by another crew or asset.

Night 4 and Following: Unrestricted night operations. The Crew Utilization limits of Chapter 3, paragraph C.3 of this manual apply. Planned aircraft recovery 30 minutes prior to sunrise. Upon final landing crew is placed in Reverse Cycle Crew Rest Status until 1600 the following day.

Ramp Down: A full 24 hours off. Daylight only operations for the following 24 hours. After that point operations are limited only by the Crew Utilization limits of Chapter 3, paragraph C.3 of this manual.

Continued on next page

A.3.c.(2)[d] Reverse
Cycle Crew Rest Status

Operational Commanders must be sensitive to the high risk imposed on night-adapted crews responding to daytime missions. Realize that frequent disruptions will place crews in a constant state of jet-lag and severely compromise endurance and safety.

A.3.c.(2)[e] Reverse
Cycle Operations
- Sunrise/Sunset
Abnormalities

Operations at extreme latitudes introduce widely varied solar cycles. Gain exposure to light (real or artificial) upon waking at 1300-1500 until 0300-0400. Maintain constant bedtimes of approximately 0600-1500.

A.3.c.(2)[f] Reverse
Cycle Operations -
Summary

Regardless of the Reverse Cycle Operations protocols of this manual, the deployed aircraft commander is tasked with evaluating the readiness of his/her crews in meeting assigned missions. Operational commanders should be cognizant that fatigue is difficult to self-diagnose and therefore avoid operations contrary to sound judgment. Even by adhering to the above doctrine, crews may still fail to reach advantages of night adaptation and therefore decline missions due to inadequate crew rest.

A.3.c.(3) Diet

The optimum diet is based on the individual's caloric needs and the adequate provision of essential nutrients. The caloric value of food consumed for a given period should balance the heat eliminated by the individual during that same period. The assistance of a flight surgeon or dietitian should be obtained in calculating these values, especially in hot or cold climates. A medical officer should always be consulted when using a special diet, whether for gaining or losing weight. The regularity with which meals are consumed is as important as the type of food. Adequate provision for meals is essential to flight safety.

A.3.c.(4) Exercise

Exercise requirements are more uncertain than any of the other factors discussed in this paragraph. Although needs vary from individual to individual and from situation to situation, some form of physical exercise is necessary to keep the body in good condition. Physical fitness programs are encouraged at aviation units.

A.3.c.(5) Stimulants and
Depressants: Alcohol

Alcohol is a well recognized central nervous system depressant. It is one of the most frequently used and abused drugs in our society. Even small amounts of alcohol in the blood can seriously impair judgment, reflexes, muscular control and also reduce the restorative effects of sleep. The level of alcohol in the body varies with the frequency and amount of alcohol intake, the length of time following cessation of drinking and an individual's body weight. A zero alcohol level is essential for aviation personnel to meet the rigorous demands of flight operations. Detectable blood alcohol or symptomatic hangovers are causes for grounding of flight crew personnel or for restricting the activities of maintenance personnel not actually involved in-flight operations. Although some personnel may completely metabolize all alcohol well within the twelve hour limit, this time span allows an adequate margin of safety before resuming flight operations.

Continued on next page

A.3.c.(6) Stimulants and
Depressants: Tobacco

The nicotine contained in tobacco is a quick acting poison. Excessive smoking causes depression of the nervous system and impairment of vision. The carbon monoxide resulting from the combustion of tobacco is absorbed by the bloodstream in preference to oxygen, resulting in a lowering of altitude tolerance. Tobacco smoke also irritates the respiratory system.

A.3.c.(7) Stimulants and
Depressants: Caffeine

The drug caffeine, contained in coffee, tea and many soft drinks, can produce an adverse effect on the body. The amount of caffeine contained in just two cups of coffee appreciably affects the rates of blood flow and respiration. In small amounts, coffee can be considered a nervous system stimulant. Excessive amounts may produce nervousness, inability to concentrate, headaches, and dizziness. Individuals accustomed to daily intake of caffeine may develop headaches and experience a loss of sharpness if daily intake is stopped or significantly curtailed. Caffeine withdrawal syndrome may impact flight safety.

A.3.c.(8) Stimulants
and Depressants:
Drugs, Medications and
Nutritional Supplements

Self-medication in any form by flying personnel can be extremely hazardous. Even relatively common medicines, such as aspirin, antihistamines, cold tablets, and tranquilizers can seriously impair the coordination and concentration required in flight. Detailed information on the use of medications and nutritional supplements by aviation personnel is found in Chapter 12 of the Coast Guard Aviation Medicine Manual, COMDTINST M6410.3 (series).

NOTE

A list of approved over-the-counter medications is contained in the Coast Guard Aviation Medicine Manual, COMDTINST M6410.3 (series). These medications are approved for acute, episodic use in the treatment of MILD, non-disqualifying conditions.

A.3.c.(9) Minor Illness

The common cold, digestive upsets, and other minor illness, which do not seriously handicap individuals in other pursuits, may produce intolerable impairments in flying personnel. Inflammation accompanying a cold can cause extreme discomfort during altitude changes and can result in permanent injury. Distention caused by gas in the stomach or intestines may create symptoms varying in intensity from mild discomfort to incapacitating pain.

A.3.c.(10) Mental and
Emotional Illness

The safe and effective operation of aircraft requires close attention, ability to ignore distractions and a high degree of emotional control. In-flight emergencies often demand rapid, accurate decisions and skillful actions. Attention to the job-at-hand can be dangerously diverted by concern over non-task-related problems. The aircrew member who is preoccupied with personal, domestic, or other problems, or who exhibits signs of poor mental attitude or emotional instability, should not be permitted to fly. An aircrew member who encounters these problems should report them to his/her commanding officer and request to be grounded. All persons in authority, particularly commanding officers, flight safety officers, and flight surgeons, must be constantly alert for signs of mental and emotional problems among aviation personnel.

Continued on next page

A.3.c.(11) Simulator
Sickness

The experience of symptoms such as nausea, disorientation, and sweating has occurred in fighter, attack, patrol, and helicopter simulators. Symptoms of simulator sickness may occur during simulator flight and last several hours after exposure. In some cases, the onset of symptoms has been delayed as much as 18 hours. These symptoms have occurred in both motion-base and fixed base simulators to pilots and other aircrew as well as instructors. Preliminary data suggest that more experienced flight personnel are at greater risk and that simulator exposure can cause perceptual sensory rearrangement which may compromise safety. Flight personnel exhibiting symptoms of simulator sickness following simulator exposure should abstain from same day flying duties. Individuals who have experienced simulator sickness in the past have a greater probability of reoccurrence and should not be scheduled to fly for 24 hours following simulator exposure.

Section B. Visual Acuity

B.1. Requirements

All aviation personnel who are required to wear corrective prescription eyewear:

- Shall wear them during all flight operations
 - Shall have a backup set of eyewear readily available to them during all flight operations
 - May not wear contact lenses for solo pilot operations
-

This Page Intentionally Left Blank

Section A. FAA Exemption 5231H

A.1. Overview

Due to the unique nature of Coast Guard air operations, the FAA has granted exemption 5231H. This exemption must be renewed with the FAA every three years. Every effort is made to keep the most current version of the granted exemption in this appendix. Regardless of the dates on the documents displayed in section B of this appendix, it can be assumed that the provisions of this exemption are authorized unless advised otherwise by Commandant (CG-711).

For purposes of conducting CG air operations, exemption 5231H waives the requirements of 91.117(b) and (c), 91.119(c), 91.159(a), and 91.209(a) of Title 14, Code of Federal Regulations. Relief from the provisions of 91.117 (a) and (b), 91.119(c), 91.159(a) are granted only to the extent necessary to conduct aircraft operations in support of drug law enforcement, drug traffic interdiction missions or assigned homeland security missions. Relief from provision 91.209(a) is also granted for search and rescue missions. It is the responsibility of the aircraft commander to adhere to the provisions delineated in exemption No 5231H (section B). Therefore the Coast Guard is authorized to deviate, if mission urgency dictates, as follows:

- Operate at speeds in excess of 200 knots when below 2500 feet AGL and within four nautical miles of the primary airport of Class C or D airspace.
 - Operate at speeds in excess of 200 knots in the airspace underlying Class B airspace or in VFR corridors through Class B airspace.
 - Fixed wing aircraft may operate in other than congested areas at altitudes below 500 feet above the surface and within 500 feet but no closer than 200 feet to the suspect. The USCG was advised to pursue sensor development that would allow operations without this exemption. (Helicopters may operate as described here without an exemption.)
 - Operate VFR below 18,000 feet MSL at altitudes other than standard VFR cruising altitudes.
 - Operate lights out.
-

Section B. FAA Exemption 5231H



U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

JUN - 6 2005

Exemption No. 5231H
Regulatory Docket No. FAA-2002-11723

Captain W. W. Peterson
U.S. Coast Guard
Office of Aviation Forces
2100 2nd Street, SW.
Washington, DC 20593-0001

Dear Captain Peterson:

This letter is to inform you that we have granted your petition to extend and amend Exemption No. 5231, as amended. It explains the basis for our decision and describes its effect.

The Basis for Our Decision

By letter dated February 23, 2005, you petitioned the Federal Aviation Administration (FAA) on behalf of the United States Coast Guard (USCG) for an extension of and amendment to Exemption No. 5231, as amended. That exemption from §§ 91.117(b) and (c), 91.119(c), 91.159(a), and 91.209(a) of Title 14, Code of Federal Regulations allows the USCG to conduct air operations in support of drug law enforcement and drug traffic interdiction without meeting part 91 provisions governing: (1) aircraft speed, (2) minimum safe altitudes, (3) cruising operations for flights conducted under visual flight rules (VFR), and (4) use of aircraft lights. The amendment you request would add duties assigned to the USCG in support of national defense issues, specifically including the conduct of air operations in support of homeland security. These support missions include airborne use of force, vertical insertion and rotary wing air intercept functions.

The USCG also petitions to amend its exemption to include the USCG Auxiliary (USCGA). The conditions and limitations applicable to the USCGA would be included in the USCG grant of exemption and limited to the USCGA where defined.

AFS-05-203-E

Figure E-1. (Sheet 1 of 5)

Continued on next page

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register. The requested extension of, and amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the USCG and the USCGA.

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 5231, as amended, remains valid with respect to this exemption and is in the public interest. Therefore, under the authority provided by 49 U.S.C. 40113 and 44701, which the FAA Administrator has delegated to me, I grant your petition subject to the conditions and limitations listed below.

Conditions and Limitations

1. The pilot of an aircraft engaged in operations authorized herein is not relieved from the see-and-avoid requirements of § 91.113, "Right-of-way rules: except water operations," or any other requirement of 14 CFR not specifically relieved under this exemption.
2. Operations under this exemption are authorized only to the extent necessary for interdiction aircraft to obtain positive identification of, and maintain visual contact with a suspect aircraft, vessel, or vehicle, search and rescue aircraft to accomplish the assigned USCG mission, or operations in support of homeland security missions including the airborne use of force, vertical insertion, and rotary wing intercepts.
3. Relief from the provision of § 91.117(b) and (c) is granted only to the extent necessary to conduct aircraft operations in support of drug law enforcement, drug traffic interdiction missions or assigned homeland security missions. Operations may be conducted without meeting the requirements of § 91.117(b) and (c), provided a dedicated observer having the sole responsibility to assist the pilot in detecting and avoiding other aircraft is onboard the aircraft. Operations may be conducted without meeting the requirements of § 91.117(b), provided the USCG pilot:
 - a. Establishes two-way radio communication with the appropriate Air Traffic Control Tower (ATCT) before entering the affected ATCT's airspace,
 - b. Complies with any instructions or clearances from the ATCT controller, and
 - c. Maintains two-way radio communication with the ATCT for the duration of the operations within the ATCT's airspace.

The use of the Air Traffic Control (ATC) Traffic Advisory Service, when available, is highly recommended. This grant of exemption, however, should not be construed as obligating any ATC facility to provide traffic advisory service. The receipt of ATC

Figure E-1. (Sheet 2 of 5)

Continued on next page

traffic advisory service does not relieve the USCG pilot from the responsibility to see and avoid other aircraft.

4. Relief from the provisions of § 91.119(c) is granted only for operations involving drug law enforcement, drug traffic interdiction, maritime law enforcement missions, homeland security missions or search and rescue missions. Operations may be conducted without meeting the requirements of § 91.119(c), provided that the USCG aircraft are operated no closer than 200 feet from the suspect and no closer than 500 feet from any other person, vessel, vehicle, or structure.
5. Relief from the provisions of § 91.159(a) is granted only to the extent necessary to conduct drug law enforcement, drug traffic interdiction missions, homeland security missions, or search and rescue missions. Operations may be conducted without meeting the requirements of § 91.159(a) provided that a dedicated onboard observer assists the pilot in seeing and avoiding other aircraft. However, the altitude requirements of § 91.159(a) must be met while operating in class B, class C, or class D airspace, unless specifically authorized by the ATC facility having jurisdiction over that airspace.
6. Relief from the provisions of § 91.209(a) is granted only for those aircraft engaged in drug law enforcement, drug traffic interdiction, maritime law enforcement operations, or homeland security missions. This relief is granted only when one of the following alternative means of deriving air traffic information is used:
 - a. Primary radar equipment capable of detecting all aircraft operating within the vicinity of the interdiction aircraft; or
 - b. Spotter aircraft operating in a position to visually detect other aircraft in the vicinity of the interdiction aircraft.

Interdiction aircraft must maintain two-way radio communication with the spotter aircraft or the primary radar surveillance aircraft. The purpose of communication is to receive air traffic information regarding other aircraft operating in the vicinity and for advising the interdiction aircraft pilot of potential collision hazards. Only the USCG interdiction aircraft are authorized to operate without lighted position lights. Any other aircraft used by the petitioner as spotter aircraft or primary radar surveillance aircraft must be operated in compliance with § 91.209(a). Interdiction aircraft must operate the aircraft's position lights to the maximum extent practicable and may only operate without lights when necessary to avoid detection by those engaged in criminal activities.

7. The pilot in the interdiction aircraft:
 - a. Must establish two-way radio communication with the appropriate ATCT before entering the ATCT's airspace areas,
 - b. Must maintain two-way radio communication while within the affected ATCT's airspace area,

Figure E-1. (Sheet 3 of 5)

Continued on next page

- c. Must comply with all instructions and clearances from ATCT, and
 - d. If available, should be receiving ATC advisory service from that ATCT.
8. The petitioner must ensure that all aircraft used to conduct operations under this exemption are equipped with an operable transponder with automatic altitude reporting capability (Mode C) that is transmitting on the appropriate code or as assigned by ATC.
 9. The petitioner must ensure that all pilots and crewmembers who will conduct aircraft operations under the authority of this exemption are thoroughly briefed and have a complete understanding of the conditions and limitations of this exemption.
 10. Notwithstanding the previous provisions of this exemption, a pilot of a USCGA aircraft, engaged in search and rescue operations authorized herein, and while assigned to Coast Guard duty, is not relieved of the responsibility to see and avoid other aircraft as required by other provisions of the regulations. Relief from the provisions of § 91.159(a) for those pilots is granted to the extent necessary to conduct search and rescue missions. Operations may be conducted without meeting the requirements of § 91.159(a), provided that a dedicated onboard observer assists the pilot in seeing and avoiding other aircraft. However, the altitude requirements of § 91.159(a) must be met while operating in class B, class C, or class D airspace, unless specifically authorized by the ATC facility jurisdiction over that airspace.
 11. Notwithstanding the provisions of this exemption from § 91.119(c), a pilot of the USCGA aircraft, engaged in search and rescue operations authorized herein, and while assigned to Coast Guard duty, is not relieved of the responsibility to comply with the other provisions of § 91.119.
 12. Notwithstanding the provisions of this exemption, a pilot of the USCGA aircraft, engaged in search and rescue operations authorized herein, and while assigned to Coast Guard duty, is not relieved of the responsibility to comply with the appropriate Federal Aviation Regulation for operations inside the boundaries of Airport Traffic Areas, Terminal Control Area, and Airport Radar Surveillance Area without coordination with, and approval by, the air traffic control manager of the area involved.
 13. Operation authorized herein must be performed:
 - a. In airspace that overlies the coastline of the United States and beyond the high seas; and
 - b. While operating in flight conditions of not less than one statute mile visibility and maintaining clear of clouds.

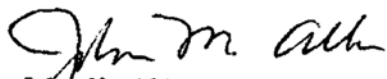
Figure E-1. (Sheet 4 of 5)

Continued on next page

14. Notwithstanding the provisions of this exemption, the pilot in command may deviate from the conditions and limitations of this exemption, provided the reason for that deviation is the rescue and aid of persons or the protection and saving of property, and it can be performed without causing undue hazard to persons or property on the surface.

This exemption terminates May 31, 2008, unless sooner superseded or rescinded.

Sincerely,



John M. Allen
Acting Director, Flight Standards
Service

Figure E-1. (Sheet 5 of 5)

Section A. Mishaps and Salvage

A.1. CASB Composition

The Commandant's Aviation Safety Board (CASB) is composed of officers on the Commandant's staff having special cognizance of aviation operations, engineering, safety and medical matters.

A.1.a. CASB Duties

The CASB is charged with the following duties:

- Reviewing all major aviation mishap reports and forwarding recommended final actions to the Chief of Staff.
- Submitting recommendations for Commandant action on preventive measures, techniques, or policies that should be placed in effect to prevent recurrence of mishaps. In addition, making specific recommendations for additional local action when reported action appears inadequate.
- Monitoring Coast Guard aviation operations and support functions to ensure effective risk management and safety (loss control) policies are incorporated and integrated as essential components of successful mission accomplishment.
- Convening and appointing all members of a COMDT Mishap Analysis Board (MAB) and determining the review/endorsement chain for all Mishap Analysis Reports they oversee.

A.2. Voice and Flight Data Recorder (VFDR)

The purpose of installed Voice and Flight Data Recorders (VFDR) on Coast Guard aircraft is to provide information and data to Coast Guard mishap investigation boards. In the event of most Class A/B mishaps, Commandant (CG-1131) will send a representative or direct the Mishap Analysis Board (MAB) President to remove the VFDR from the aircraft. Custody of the VFDR will reside with Commandant (CG-1131) for the download of voice and data information. This information may be used to support a post-mishap animation of the events. Downloaded information will then be provided to the MAB President for analysis. The recordings of intercom transmissions captured on voice recorders are protected by the Privacy Act and can only be used for mishap analysis purposes. Transcripts of the relevant portions of internal cockpit transmissions may be released. Flight data, such as aircraft position, time, and heading information, obtained from the FDR is not privileged and is not safeguarded. VFDRs allow for more precise determinations of aviation mishap causal factors, which assists in preventing recurrences and thereby saves lives and valuable property.

VFDR data may contain classified communications or geographic information and must be handled accordingly. When in doubt assume the information is classified until proven otherwise.

Continued on next page.

Continued on next page

A.2.a. Voice and Flight Data Recorder (VFDR) (continued)

The Flight Safety Officer and/or Engineering Officer of an air station may request to use these recording devices to assist in maintenance and troubleshooting or unit level mishap investigation activities. Such requests must be made to Commandant (CG-1131 and CG-41). The Aviation Safety Program guidance of the Safety and Environmental Health Manual, COMDTINST M5100.47 (series) includes the process to request a CV/FDR download.

Only the Commanding Officer can authorize aircraft flight without a mishap recorder.

A.3. Flight Restrictions Following Aircraft Mishaps

A.3.a. Class A and B Mishaps

Aircrew personnel shall be temporarily grounded following any aircraft mishap in which the aircraft sustained Class A or Class B damage or any crew member has been injured. Aircrew personnel must be evaluated by a flight surgeon and be found physically qualified and aeronautically adaptable for aviation duties prior to resuming flight status. Waiver of this requirement may only be obtained from Commandant (CG-711). Critical Incident Stress Management intervention may be warranted and is at the discretion of the Commanding Officer.

A.3.b. Class C and D Mishaps

Temporary grounding of aircrews following Class C or Class D mishaps may be advisable in certain situations and shall be at the discretion of the Commanding Officer or his designated representative.

A.4. Mishap Experience

A.4.a. General

There have been two trends in Coast Guard aviation during the previous 10 to 15 years which deserve priority attention from command and control as well as aircrew personnel. Such focus is appropriate as a part of our service-wide loss control commitment to enhance operational capability by reducing mishap related injury and equipment damage. The first trend is the controlled flight into terrain (CFIT) by Coast Guard aircraft and the second is the predominance of Class A aviation mishaps during the holidays (December – January) and the summer months (July – September).

A.4.b. Controlled Flight into Terrain (CFIT)

Controlled flight into terrain has been a recurring problem in Coast Guard aviation and has been a factor in about 50 percent of our aviation Class A mishaps and aviation deaths. Mission risk assessment at all levels of command structure and aircrew situational awareness are critical to eliminating CFIT mishaps.

Continued on next page

A.4.c. Seasonal Mishap Experience

The Coast Guard has experienced a majority of major mishaps during the holiday season and weeks directly following (December – January) and fourth quarter (July - September) of the fiscal year. The reason for this trend is not known. Many issues are at play in these periods which may not be as prevalent in other times during the year including: seasonally higher summer operations tempo, personnel desiring extended personal leave periods, focus on family celebrations, and the arrival of new personnel unfamiliar with local operations. Personnel scheduling, mission scheduling and operational pacing are critical to eliminating aviation deaths.

A.5. Recovery and Salvage of Mishap Aircraft

The recovery and salvage of a mishap aircraft and the assignment of a salvage officer is the responsibility of the reporting custodian (normally the Commanding Officer of a Coast Guard aviation unit or Coast Guard cutter with a deployed helicopter). If circumstances dictate and the reporting custodian concurs, the salvage officer need not be a member of the reporting custodian's command. Headquarters support is available for coordinating assistance from other services or agencies, technical information, exceptional funding requirements, etc. , which are beyond the capability of the individual unit or district. The Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series), further defines specific command, district, area, and headquarters responsibilities for the various elements of the salvage/recovery effort. It also contains a list of reference material pertaining to helicopter salvage and recovery.

A.6. Critical Incident Stress Management

A.6.a. General

It is well documented that traumatic events such as combat, natural disasters, and more localized human tragedies such as fires, serious accidents, loss of life or near loss of life can leave victims and rescue/law enforcement personnel with lasting personal emotional conflict. It is also well documented that personnel employed in the rescue/law enforcement professions are unlikely to seek out assistance.

A.6.b. Coast Guard Critical Incident Stress Management Assistance

Because Coast Guard aircrews face traumatic situations on a daily basis, the Coast Guard has followed the lead of law enforcement, fire and paramedic organizations throughout the nation in adopting Critical Incident Stress Management (CISM) assistance as an organizational norm to debrief individuals, crews, and units experiencing a traumatic event (including a serious aviation mishap of a Coast Guard aircraft). Participation has been demonstrated to facilitate personnel retention, on-the-job performance as well as reduce stress in personal lives and relationships. Coast Guard Critical Incident Stress Management (CISM) guidance can be found in the Critical Incident Stress Management manual, COMDTINST 1754.3.

A CISM network of trained personnel exists throughout the Coast Guard and all commands. Crews and individuals are encouraged to participate in the process when traumatic events are encountered.

This Page Intentionally Left Blank

**Underwater
Egress Trainer
Performance
Evaluation Form
and USCG
Aircrew Swim Test
Completion Form**

Date: _____

Underwater Egress Trainer Performance Evaluation Form

This form is to be completed by the training facility instructor personnel on Coast Guard trainees who attend underwater egress training. The form will be used by the individual's commanding officer and by Commandant (CG-37RCA) to determine the need for remedial training or other administrative action.

Trainer's Name: _____
SSN: _____
Rank/Rate: _____
Unit: _____

C.G. Swim Evaluation Pass / Fail
Date: _____

CRITICAL DEFICIENCIES

- 1. Failed swim test.
- 2. Refused to participate in:
 - a. Swimming
 - b. Egress Training

Completion Stamp

EVALUATION
Satisfactory / Unsatisfactory
(Circle one)

EGRESS TRAIL
(Make check in appropriate block)

- 3. Panic and/or disorientation with:
 - a. Early release of lap belt
 - b. Premature removal of goggles
 - c. Immediate egress through wrong exit
- 4. Drop-out prior to completion
- 5. Diver rescues

1	2	3	4	5	6

NON-CRITICAL DEFICIENCIES

- 1. Failure to release handle and/or slide bar.
- 2. Swimmer vice pulling oneself out of trainer.
- 3. Early release of lap belt without panic.
- 4. Egress through wrong exit without panic.
- 5. Failure to move from handhold to handhold.

Instructor's Name: _____
Rank/Rate: _____
Organization: _____
Signature: _____

NOTE: The commanding officer shall submit a letter report on all failures of the Underwater Egress trainer. The commanding officer may issue a waiver to personnel who fail for minor reasons.

Figure G-1.

USCG Aircrew Swim Test Completion Form

In accordance with the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series), the following individual has satisfactorily completed the CG Aircrew Swim Test, which consists of the following:

1. Swim 75 yards while wearing an un-inflated, normally equipped (weighted) life vest, flight suit, and flight boots, while using the crawl stroke, breaststroke, backstroke, side stroke, or a combination thereof.
2. Immediately after completing the swim, the individual will tread water or drown proof for a minimum of two minutes.

Note: Successful completion of the CG Aircrew Swim Test fulfills the “equivalent” requirements of the U.S. Navy 2nd Class Swim Test, for the purpose of completing Underwater Egress Training.

Name: _____

Completion date: _____

Instructor's name (print): _____

Instructor's signature: _____

Unit: _____ Employee ID: _____

Figure G-2.

Section A. Logbooks

A.1. General

This guide is intended to assist Coast Guard Aviators in properly filling out their flight logbooks. These guidelines represent minimum standards for filling out a flight logbook. Each aviator may use personal discretion when deviating from these guidelines to ensure a proper flight record is kept. It is the aviator's responsibility to maintain each section of the logbook and certify its accuracy by signing the Pilots block in the bottom right corner of each page. All logbook entries shall be made in ink. All entries shall be neatly printed or stamped with all signature blocks properly signed.

A.2. Simulator Activity

Simulator time and simulator approaches shall be logged on separate pages from flight time. This shall be done by starting from the back of the book and moving forward when logging simulator activity. Simulator time shall be included in total accumulated flight time. Place the simulator time for each month above the "TOTAL THIS PAGE" block and add it to the time brought forward from the previous month. Precede this time with the entry "Simulator."

A.3. DIFPRO/DIF-DEN

All aviators in DIFPRO/DIFDEN status will maintain control of their own logbooks.

A.4. Entry Errors

A single line shall be drawn through any errors, initialed and a correct entry made on the next line or appropriate space.

A.5. Source of Pilot Time

Pilot Time shall be entered exactly as recorded on the Aircraft Flight Record (CG-4377), in the flight records section of the Electronic Aircraft Logbook (EAL).

A.6. The Aviator's Responsibility

Each aviator shall ensure his/her logbook is closed out, and certified correct on a monthly basis. The logbook shall be submitted to the Commanding Officer, or authorized deputy, for approval and signature semiannually.

Section B. Entry Instructions

B.1. General

Entries on pages that are listed as “Optional” are not required to be filled in by aviators. If these pages are kept up-to-date, they shall be kept following the enclosed guidelines.

B.2. Designations and Qualifications

See example in paragraph D.1 of this appendix.

Lines shall be filled out in sequence, dated and signed. (“Stamped” entries are authorized for the qualifications but not for the signature.) When a subsequent book is started, it is not required to duplicate stamps in the new logbook. All new designations shall be placed in the new book.

Entries include (examples are not totally inclusive):

Pilot Designations

- Copilot
- First Pilot
- Aircraft Commander
- Instructor Pilot
- Flight Examiner

Qualifications

- HU-25C Air Intercept Qualifications
- Day/Night/NVG Shipboard Qualifications
- VI
- NVG

Recurrent Qualifications

- SAR Procedures Checks
- Standardization Checks
- Instrument Checks
- AUF Checks
- TACVI Checks
- RWAI Checks
- Semiannual Day/Night/NVG Shipboard Qualifications

Miscellaneous Designations

- Initial Standard Instrument Rating

Continued on next page

NOTE

Each logbook shall have a "Day/Night/NVG Ship Qual" stamp on this page EVERY semiannual period the pilot has met his/her requirements. If the pilot does not complete Day, Night and NVG minimums for a particular semiannual period, line out the qualification that was not met. The logbook shall be stamped for the day the landings were completed. (This may be completed at the end of the semiannual period.)

B.3. Personal Changes

Optional.

B.4. Summary of Total Flight Record

See example in paragraph D.2 of this appendix.

Entries are optional.

Entries should include total flight time of all previous aircraft flown prior to starting a new logbook. All prior flight time from previous services shall be entered here. These shall be carried over each time a new logbook is started.

B.5. Flight Record Summary, Total and for 12 Months Preceding This Log

See example in paragraph D.3 of this appendix.

Entries are optional.

Entries filled in here should be copied from the previous logbook. The first column should include total accumulated flight time to date of opening of the new book. The remaining columns should include flight time from the previous 12 months. (Example: If the book is being started on June 1, 1992, the monthly columns would represent the flight time from Jan - May 1992 and June - Dec 1991.) The items applicable to Coast Guard aviators that are listed on this page are explained in paragraph B.7 of this appendix.

B.6. Summary of Pilot Time by Month, Model, Etc.

See example in paragraph D.4 of this appendix.

Entries are optional.

Entries should include model of aircraft flown, individual years and breakdown of monthly total flight time from this logbook.

Year Totals are by calendar year.

There shall be separate line entries for each make/model of aircraft flown during each calendar year.

B.7. Monthly Log Entries

See examples in paragraph D.5 of this appendix.

Entries are mandatory.

The month and year are entered at the top of each page.

Continued on next page

The DAY, MODEL, and SERIAL NUMBER blocks are filled in with information from each individual flight. The day is the number of the day in the month, the model is the specific model of aircraft flown and the serial number is the tail number of the aircraft flown. Entries shall be recorded in chronological sequence.

The KIND OF FLIGHT column is optional and reserved for employment category(ies) for each flight as recorded on the Blue sheet if used.

The TOTAL PILOT TIME, FIRST PILOT and COPILOT columns shall be recorded exactly as written on the Blue Sheet. The A/C COMDR column shall be designated for A/C time (time logged as pilot in command).

Entries in the SPECIAL CREW TIME column are for Instructor Pilot time. Line through the words "SPECIAL CREW" and replace with "IP" at the top of the column.

Entries under INSTRUMENT TIME shall be recorded exactly as written on the Blue Sheet.

Entries under NIGHT TIME shall be recorded exactly as written on the Blue Sheet. This column shall also be used to record NVG time. Split the individual block into an upper and lower half and record Night Time in the upper half and NVG Time in the lower half.

Entries under the three CARRIER columns shall be used for recording operational maneuvers such as pump drops, hoists, rescue swimmer deployments, autorotations, etc. The same Operational Codes used on the Blue Sheet shall be used here. A listing of Operational Codes is provided in paragraphs C.1 and C.2 of this appendix. The number of iterations shall be recorded in the ARR column, the Operational Code for the maneuver shall be recorded in the T&G column, and the condition (D for Day, N for Night, and G for NVG) shall be recorded in the BOL column. If more room is required to record the maneuvers completed on a specific flight, use the next line available.

The FCL Column shall be used to record ship landings, with the number of landings completed followed by the condition (D for Day, N for Night, and G for NVG).

The SEA/LAND column is for non-shipboard landings. The number of landings completed shall be recorded followed by the condition (D for Day, N for Night, G for NVG). Fixed Wing aviators may precede the condition code with a T for a Touch and Go landing or an F for a full stop landing (e.g., 1TD for a Touch and Go, Day).

The CATAPULT column is reserved for recording takeoffs, entries are optional.

The three STD INST APPR COMPL columns are for both Actual and Simulated Instrument Approaches flown. The NO column is for the number of approaches flown, the TYPE column is for the type of approach and the S column is for designating whether the approach was flown under day or night conditions, coupled or uncoupled. Specific codes to be used in these columns are listed in paragraph C.3 of this appendix.

The REMARKS column is for information regarding the flight not already logged. Typically this information would include Unit Case Number for SAR

Continued on next page

cases, "RT" and the appropriate number for standardized recurrent trainers, whether the flight was a STAN, SAR or Instrument Check, etc. The name of the other pilot or the word "solo" shall be recorded at the bottom of the block.

The TOTAL THIS PAGE line is for totaling all information for that page from the columns above. If the flight time entries for a month exceed the number of lines available on one page, a second page shall be used. In this case, on the line just above the TOTAL THIS PAGE line, print "CONTINUED ON NEXT PAGE." If more than one page is used for a month, it is necessary to total each page. In that case, the TOTAL THIS PAGE, BROUGHT FORWARD and TOTAL TO DATE lines shall also be filled in. The PILOT block shall be assigned on all pages for the month.

The BROUGHT FORWARD line is information brought forward from the previous month's TOTAL TO DATE line. At the beginning of every semiannual period, this line will commence with all 0's except for the Total Accumulated Pilot Time Block. This block is continuously brought forward from the previous TOTAL TO DATE figure.

The TOTAL TO DATE line is for adding the TOTAL THIS PAGE line to the BROUGHT FORWARD line. These numbers shall be forwarded to the next month's BROUGHT FORWARD line (except for January and July when only the Total Accumulated Pilot Time is brought forward).

The APPROVED block shall be signed by the Commanding Officer or his/her authorized representative at the end of each semiannual period, when the aviator is transferred, or when the Commanding Officer is transferred.

The TOTAL THIS PAGE time for each month shall include all aircraft and simulator time for each aircraft qualification. It is the responsibility of each pilot to compile his or her flight time, and if dual qualified, place it in the SUMMARY OF PILOT TIME BY MONTH, MODEL section in the front of the book.

Each pilot shall write his/her simulator time for the month above the TOTAL THIS PAGE line and add it to the monthly flight time. This shall be prefixed with the word "Simulator" next to it. This line does not take the place of recording individual simulator time at the back of the logbook.

A solid line shall be drawn at the bottom of each page, after the last entry for that month, to close out that page. The line shall be drawn diagonally from left to right starting just below the DAY entry of the last flight and ending just above the CERTIFIED A CORRECT RECORD block on the right. See the example in paragraph D.5 of this appendix.

**B.8. Flight
Clothing Record**

Entries not required.

**B.9. Accident
and Flight Rule
Violation Record**

See examples in paragraph D.6 of this appendix.

Entries shall include year, number of flight violations and/or accidents for each period. The signature blocks shall be signed by the Commanding Officer or an authorized representative.

Normally there is one signature per semiannual period. The appropriate periods may be changed in the quarter column due to PCS transfer of the aviator or the Commanding Officer.

Continued on next page

The top section, "Summary incidents prior to this book and subsequent," shall have all zeros entered for first logbooks. For subsequent logbooks, the appropriate year and number of accidents/violations shall be entered from the previous logbook up to and including the last six years. The top signature block shall be signed concurrently at the end of the first semiannual period of the new logbook. This signature authenticates the previous number of accidents and/or violations.

If the aviator or Commanding Officer is transferred outside the normal semiannual period, the entries shall be entered and signed for the period from the previous semiannual period to the date of transfer. This is done by lining out the month in the quarter column and writing in the proper departing month. The next line will then have an adjusted period with a corrected beginning month. See the example in paragraph D.6 of this appendix depicting an aviator's transfer in May.

Section C. Operational/Instrument Codes

C.1. Operational Codes

Operational Codes			
DROP CODES		RESCUE SWIMMER CODES	
D25PS	Drop - U25 - PUMP(Simulated)	RLA	Lives Assisted (Using RS)
D25S	Drop - U25 - UTIL/RAFT/RADIO(Simulated)	RLS	Lives Saved (Using RS)
DFF	Drop - Freefall	RSD	Swimmer Direct(Real)
DP	Drop - Pump	RSD-T	Swimmer Direct(Trng)
DR	Drop - Raft	RSF	Swimmer Free(Real)
EMERGENCY CODES		RSF-T	Swimmer Free(Trng)
EDE	Air Deflector Extension Drill	RSS	Swimmer Sling(Real)
EEO	Engine Failure Drill	RSS-T	Swimmer Sling(Trng)
EFE	Flap Extension(Manual) Drill	RSV	Swimmer Vertical(Real)
EFM	Fuel Sys Malfunction Drill	RSV-T	Swimmer Vertical(Trng)
EGEX	Gear Extension(Manual) Drill	STAN CHECK CODES	
EHE	Hoist Emergency Drill	SGC	NVG Procedures Check
EEOL	Engine Out Landing Drill	SINSTC	Instrument Procedures Check
ELC	Lost Comms Drill	SINTC	Intercept Procedures Check
EO2M	O2 Mask Drill	SSARC	SAR Procedures Check
ESMK	Smoke/Fire Elimination Drill	SSC	Standardization Check
HOIST CODES		STC	Tactics Procedures Check
HADC	Perform as Down Crew for Hoist	TACTICAL CODES	
HB	Hoist - Basket	TAG	Aviation Gunner(perform as)
HCSL	External Cargo/Sling	TAI	Intercept - FWAI
HDC	Hoist - Downed Crew Recovery	TAID	Air Identification
HDW	Hoist - Dead in Water	TAT	Intercept - FWAI to Tracking
HDWTL	Hoist - Dead in Water(Trail Line)	TFF	Formation Flight
HL	Hoist - Litter	TGF	Gunnery Flight
HP	Hoist - Pump	TIHLM-T	Intercept - Oncoming L SEAT MIN CUES(Trng)
HS	Hoist - Sling	TIHL-T	Intercept - Oncoming L SEAT(Trng)
HVD	VERTICAL DELIVERY - HOIST(Real)	TIHRM-T	Intercept - Oncoming R SEAT MIN CUES(Trng)
HVD-T	VERTICAL DELIVERY - HOIST(Trng)	TIHR-T	Intercept - Oncoming R SEAT(Trng)
HVIF	VERTICAL INSERTION - FASTROPE(Real)	TIOLR-T	Intercept - OTHER(Trng)
HVIF-T	VERTICAL INSERTION - FASTROPE(Trng)	TIONO-T	Intercept - OP EX NORAD(Trng)
MISCELLANEOUS CODES		TMC	Mission Commander
ML	Load Exercise	TPSG	POSITION: SIGNAL POSITION
MO	OTHER* EXPLAIN IN REMARKS	TRWAI	INTERCEPT - RWAI(Real)
PROFICIENCY CODES		TRWAI-T	INTERCEPT - RWAI(Trng)
PAR	Autrotation	TTA	Tactical Approaches
PAV	Aircraft Vectoring	TTF	Tactics Flight
PAW	Airways Training	TTVI	Tactical VI boat or land(Real)
PC	CATCH	TTVI-T	Tactical VI boat or land(Trng)
PPC	Platform - Calm Water		
PHA	Inst Letdown Procedure (Heliplt Asst)	DU	MA-2/3 Kit Drop
PIF	Instructor Flight	AMC	Air Mission Commander
PM	MATCH		
PML	Inst Letdown Procedure (Manual)		
PP	PATCH		
PPR	PLATFORM - Rough Water		
PRV	RADAR VECTORS		
PSR	Survivor Relocation Pattern		

Figure H-1.

Continued on next page

C.2. Rescue Swimmer Codes

RD – Swimmer Direct (Actual)
RF – Swimmer Free Fall (Actual)
RS – Swimmer Sling/Harness (Actual)
RR – Swimmer Vertical Surface (Actual)
XD – Swimmer Direct (Training)
XF – Swimmer Free Fall (Training)
XS – Swimmer Sling/Harness (Training)
XR – Swimmer Vertical Surface (Training)

C.3. Instrument Codes

Approach Type*
P – Coupled Precision
N – Non-precision
U – Uncoupled Precision
* - C preceding Approach Type code designates a circling approach (e.g., CN indicates a circling non precision approach)
Approach Condition
D – Day
F – Full Stop
G – NVG
L – Approach to landing
N – Night
T- Touch and Go

C.4. Emergency Codes

EC — Lost COMMS
EF — Fuel Malfunction
EG — Gear Extension
EH — Hoist Emergency
EO — Other Emergency (Explain)
EP — Flap Extension
ES — Smoke/Fire
EX — Emergency Oxygen Mask Drill

Section D. Examples

D.1. Qualifications and Achievements

QUALIFICATIONS AND ACHIEVEMENTS (EXAMPLE)		
QUALIFICATION	DATE	SIGNATURE
STD INST RATING	12 JUN 90	
HH65A COLPILOT	31 AUG 90	
INSTRUMENT QUALIFIED ROTARY WING	31 AUG 90	
HH65A STAN I CHECK	02 FEB 91	
HH65A STAN II CHECK	08 FEB 91	
HH65A FIRST PILOT	22 SEP 92	
RESCUE SWIMMER QUAL	22 SEP 92	

D.2. Summary of Total Flight Record

SUMMARY OF TOTAL FLIGHT RECORD (EXAMPLE)					
AIRCRAFT MODEL	PILOT-TIME	AIRCRAFT MODEL	PILOT-TIME	A/C MODEL	A/C CDR
T-34C	102.8				5.5
TH-57	110.3				4.2
HH52A	1200.3				950.2
HH60J	120				79.1

Continued on next page

**D.3. Flight Record
Summary, Total
and for 12 Months
Preceding This
Log**

FLIGHT RECORD SUMMARY, TOTAL AND FOR 12 MONTHS PRECEDING													
ITEM	TOT ACC	20- JAN	20- FEB	20- MAR	20- APR	20- MAY	20- JUN	20- JUL	20- AUG	20- SEP	20- OCT	20- NOV	20- DEC
TOTAL PILOT TIME	1800.2												
FIRST PILOT	900.1												
COPILOT	900.1												
A/C COMDR	1450.2												
SPEC CREW	876.3												
*													
*													
*													
*													
*													
*													
BOLTERS	N/A												
CATAPULTS	3000												

Figure H-2.

Continued on next page

**D.4. Summary
of Pilot Time by
Month, Model, Etc.**

SUMMARY OF PILOT TIME BY MONTH, MODEL, ETC (EXAMPLE)																	
YEAR AND ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN MAR	APR JUN	JUL SEP	OCT DEC	YEAR TOTAL
2000 HH65A	30.1	22.3	19	26.7	18	22.5	23	24.6	14	21	14.8	15	70.4	67.2	61.6	50.8	250
2000 HU25A	12.9	12	11.9	21	13	16.9	18	11.8	14	17.9	21	10	56.7	50.9	43.8	48.6	180
2001 HH65A	29.9	22	17.5	13	19.2	22	21.4	24	20.1	18	14.5	19	63.3	54.2	65.5	51.5	235.5
2001 HU25A	16	14	23.8	20	12	16.9	25	16.9	22	15.7	17.9	21	53.8	58.8	63.9	54.6	231.1

Figure H-3.

Continued on next page

D.5. Monthly Log Entries

MONTH		MARCH		YEAR		1992												
NO	AIRCRAFT		KIND OF FLIGHT CODE	FLY TIME			SPECIAL CREW TIME	INSTUMENT TIME				LANDINGS		STD INSL. APPR. COMPL. NO PARTS		REMARKS		
	MODEL	SERIAL NUMBER		TOTAL PILOT TIME	FIRST PILOT	COPILLOT		A/P COPILOT	ACI	SM	SEV. TIME	CORRECT.	STD. TIME	LANDINGS	NO		TYPE	S
1	HUBSA	8888	28	2.2	1.5	.7	2.2	2.2				4 NS	1 FN	1	1	1	LT PILOT MINE	
2	HUBSA	2512	3	3.8	2.3	1.3					3 NS	1 FN	1	1	1	UCH 1-48		
											1 OP	1 FD	1	1	1	DU		
																	SAC TRNG	
																	SOLO	
				COMBINED ON HDG TIME														
TOTAL THIS PAGE				32.5	22	10.8	5.3	4.4	0	.4	2.9			11 70				CORREPERA CORRECT RECORD
BROUGHT FORWARD				2481.5	45.3	23.3	2.2	16.6	2.1	8.8	2.1							PILOT
TOTAL TO DATE				2523.8	70	45.2	32.8	7.2	2.1	9.3	6.0							CD. or authorized deputy

MONTH		MARCH		YEAR		1992												
NO	AIRCRAFT		KIND OF FLIGHT CODE	FLY TIME			SPECIAL CREW TIME	INSTUMENT TIME				LANDINGS		STD INSL. APPR. COMPL. NO PARTS		REMARKS		
	MODEL	SERIAL NUMBER		TOTAL PILOT TIME	FIRST PILOT	COPILLOT		A/P COPILOT	ACI	SM	SEV. TIME	CORRECT.	STD. TIME	LANDINGS	NO		TYPE	S
16	HUBSA	8888	28	2.2	1.5	.7	2.2	2.2				4 NS	1 FN	1	1	1	LT PILOT MINE	
2	HUBSA	2512	3	3.8	2.3	1.3					3 NS	1 FN	1	1	1	UCH 1-48		
											1 OP	1 FD	1	1	1	DU		
																	SAC TRNG	
																	CDR RICH	
SIMULATOR 11-15 MAR				10.0														
TOTAL THIS PAGE				35.7	23.7	12.0	3.4	10.0	0.8	3.6	11.5			12 13				CORREPERA CORRECT RECORD
BROUGHT FORWARD				2523.8	78.0	45.2	32.8	7.2	2.1	9.2	5.0							PILOT
TOTAL TO DATE				2559.5	115.7	60.9	44.0	10.6	3.0	12.8	10.5							CD. or authorized deputy

Figure H-4.

Continued on next page

D.6. Accident and Flight Rule Violation Record

ACCIDENT AND FLIGHT RULE VIOLATION RECORD						
	PERIOD		NUMBER		SIGNATURE	
	YEAR	QUARTER	ACCI-DENTS	RULE VIOL.		
SUMMARY INCIDENTS PRIOR TO THIS BOOK AND SUBSEQUENT 1-1-50	1994		0	0	SIGNATURE ON RECORD IN PREVIOUS LOG BOOK AUTHENTICATED	
	1995		0	0		
	1996		0	0		
	1997		0	0		
	1998		0	0		
	1999		0	0		
YEAR IN WHICH THIS LOG BOOK BEGAN	20__	Jan-Mar	0	0		
		Apr-Jun	0	0		
		Jul-Sep	0	0		
		Oct-Dec	0	0		
REMAINING PERIOD COVERED BY THIS LOG BOOK	20__	Jan-Mar	0	0		
		Apr-Jun	0	0		
		Jul-Sep	0	0		
		Oct-Dec	0	0		
	20__	Jan-Mar				
		Apr-Jun				
		Jul-Sep				
		Oct-Dec				
	20__	Jan-Mar				
		Apr-Jun				
		Jul-Sep				
		Oct-Dec				
		Jan-Mar				

Figure H-5.

This Page Intentionally Left Blank

Section A. Coast Guard Auxiliary Aviation Overview

A.1. General

This appendix is provided for background information purposes. The Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series) is the primary regulation governing the employment of Auxiliary aircraft. The Coast Guard Air Station Commanding Officer has the sole order issuing authority (OIA) to assign Auxiliary aircraft aviation missions.

Using Auxiliary Aviation in conjunction with Coast Guard Aviation will increase the capability of any Coast Guard District, Sector, or Air Station. It is a force multiplier for Coast Guard Aviation. In this regard it is helpful to review the Auxiliary Aviation Mission Statement.

“Assist the Coast Guard in all areas authorized by the Commandant by performing any Coast Guard function, power, duty, role, or operations authorized by law. It shall be the responsibility of the Coast Guard Auxiliary to provide aircraft which meet all current Federal Aviation Regulations along with trained and qualified crews to accomplish these tasks.”

A.2. Aircraft

Currently, the Coast Guard Auxiliary Aviation branch is comprised of a variety of aircraft. These aircraft range in size from 2-seat single engine to twin engine cabin class aircraft. Obviously, these aircraft represent a range of capabilities. The order issuing authorities must be cognizant of this fact. They are urged to maintain close contact with the Auxiliary pilots to familiarize them with the capabilities/limitations of the aircraft and pilots in their Area of Responsibility. Unlike Coast Guard Aviation, Auxiliary Aviation does not have an equitable spread of aircraft throughout the country. The aircraft available in any given district is directly related to membership population and the kind of aircraft those members offer for use and fly.

A.3. Communications

Virtually all Auxiliary aircraft are equipped with two VHF-AM transceivers. In addition, all Auxiliary aircraft are required to be equipped with a VHF-FM radio. The Auxiliary air observer operates the VHF-FM radio on mission flights.

Auxiliary aircraft operating under approved orders shall use the telephony designator "COAST GUARD AUXAIR" in air/ground communications and the three-letter identifier "CGX" when filing flight plans.

A.4. Navigation

Most Auxiliary aircraft are equipped with two VORs, an ADF, Localizer, ILS, and DME. In addition, some Auxiliary aircraft are equipped with weather radar, storm scopes, an HSI, and RNAV. With the proliferation of low cost panel mounted and hand held GPS units, most Auxiliary aircraft have VFR GPS capability.

A.5. Pilots

As with aircraft, Auxiliary pilots represent a range of capabilities. The Auxiliary has pilots with a Private Pilot license and 200 hours total time to pilots holding an Airline Transport Pilot license and thousands of hours. Auxiliary pilots are not required to have an instrument rating. Order Issuing authorities should be aware of which pilots are instrument rated and which are not. Consult the Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series) for specific Auxiliary pilot designation and minimum pilot training requirements.

Continued on next page

A.6. Training

All Auxiliary pilots and observers must receive training in water survival techniques, emergency egress procedures, and use of survival equipment on an annual basis. In addition, Auxiliary pilots must meet the training requirements contained in the Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series).

Section B. Missions

B.1. Search and Rescue

With most Auxiliary aircraft being fixed wing, the Auxiliary role in this mission is mainly to search. Upon location of a distressed vessel or the object of a search, Auxiliary aircraft should be prepared to stay on scene, fuel permitting, until a Coast Guard air or surface asset arrives. The Coast Guard asset will become On-Scene Commander and assign any further tasking to the Auxiliary aircraft.

B.2. Pollution Response

Auxiliary aircraft are excellent platforms for use in the pollution response role. Auxiliary aircraft provide the MSO with a dedicated resource that if used correctly, can effectively enhance spill detection and response. Pollution response flights can be performed by aircraft as a dedicated mission or in conjunction with a normal Auxiliary safety patrol.

B.3. Aids to Navigation

The relatively high speed of Auxiliary aircraft maximize the amount of navigation aids that can be surveyed versus using a vessel to perform the same task. Potential problems with navigation aids discovered from the air can be checked further by visits from Coast Guard or Auxiliary surface craft.

B.4. Chart Updating

The use of Auxiliary aircraft is ideal for the chart updating mission. Auxiliary pilots and observers can identify objects that need to be added or deleted from nautical or aeronautical charts. More specific information can be gathered on the object during a ground or water based follow-up survey.

B.5. Living Marine Resources (LMR) and Marine Protected Species (MPS) Patrols

Some air stations are tasked with flying agents from the National Marine Fisheries Service on LMR/MPS patrols. To fully complete this mission, the Auxiliary aircraft should be configured for offshore operations. When configured for offshore operations, Auxiliary aircraft are excellent platforms for this mission.

B.6. Law Enforcement

Although the Auxiliary has no law enforcement powers, Auxiliary aircraft can be a useful tool for overt surveillance and information gathering. As with virtually any other Coast Guard mission, the LE mission can be conducted with a normal safety patrol or as a dedicated mission. Auxiliary aircraft should record and report any unusual activity detected during the course of a patrol. A thorough debrief of Auxiliary personnel should be conducted by the air station or group LE Officer upon their return.

B.7. Ice Patrols

Auxiliary aircraft are an effective tool in detecting ice buildups in the Northeast Rivers and the Great Lakes. Districts where ice is a problem during the winter should take advantage of the benefits of Auxiliary air in the Ice Detection mission.

B.8. Logistics/Passenger Transport

Auxiliary Air can be used as effectively in this role as Coast Guard Air can be. Air Station Commanding Officer order issuing authority should exercise due care in assigning the proper pilot and aircraft to match the appropriate logistics or transport flight.

Continued on next page

**B.9. Area
Familiarization**

Auxiliary aviation can be utilized in this role as a cost effective way of familiarizing Group, MSO, and District personnel with their Area of Responsibility (AOR). Many questions can be answered by viewing the AOR from the air.

Section A. Forms

Form	Title
DD Form 175	Military Flight Plan
DD Form 175-1	Flight Weather Briefing
FAA Form 7233-1	DOT-FAA Flight Plan
DD Form 1801	DOD International Flight Plan
Form 7233-4	ICAO Flight Plan
CG Form 5285	United States Coast Guard Training Record
DD Form 2	Retired members ID card (Blue or Gray)
DD Form 2	Active duty members ID card (Green)
DD Form 1173	Dependents ID card
Form F	Aircraft Weight and Balance

This Page Intentionally Left Blank

Section A. Disclosure For Persons Flying Aboard Federal Government Aircraft

Generally, an aircraft used exclusively for the U.S. Government may be considered a 'public aircraft' as defined in 49 U.S.C. 40102 and 40125, unless it is transporting passengers or operating for commercial purposes. A public aircraft is not subject to many Federal aviation regulations, including requirements relating to aircraft certification, maintenance, and pilot certification. If a U.S. Government agency transports passengers on a Government aircraft, that agency must comply with all Federal aviation regulations applicable to civil aircraft. If you have questions about the status of a particular flight, you should contact the agency sponsoring the flight.

You and your family have certain rights and benefits in the unlikely event you are injured or killed while riding aboard a Government aircraft. Federal employees and some private citizens are eligible for workers' compensation benefits under the Federal Employees' Compensation Act (FECA). When FECA applies, it is the sole remedy. For more information about FECA and its coverage, consult with your agency's benefits office or contact the Branch of Technical Assistance at the Department of Labor's Office of Workers' Compensation Programs at (202) 693-0044. (These rules also apply to travel on other Government-owned or operated conveyances such as cars, vans, or buses.)

State or foreign laws may provide for product liability or "third party" causes of actions for personal injury or wrongful death. If you have questions about a particular case or believe you have a claim, you should consult with an attorney.

Some insurance policies may exclude coverage for injuries or death sustained while traveling aboard a Government or military aircraft or while within a combat area. You may wish to check your policy or consult with your insurance provider before your flight. The insurance available to Federal employees through the Federal Employees Group Life Insurance Program does not contain an exclusion of this type.

If you are the victim of an air disaster resulting from criminal activity, Victim and Witness Specialists from the Federal Bureau of Investigation (FBI) and/or the local U.S. Attorney's Office will keep you or your family informed about the status of the criminal investigation(s) and provide you or your family with information about rights and services, such as crisis intervention, counseling and emotional support. State crime victim compensation may be able to cover crime-related expenses, such as medical costs, mental health counseling, funeral and burial costs, and lost wages or loss of support. The Office for Victims of Crime (an agency of the Department of Justice) is authorized by the Antiterrorism Act of 1996 to provide emergency financial assistance to state programs, as well as the U.S. Attorneys Office, for the benefit of victims of terrorist acts or mass violence.

Continued on next page

If you are a Federal employee:

- If you are injured or killed on the job during the performance of duty — including while traveling aboard a Government aircraft or other government-owned or operated conveyance for business purposes, you and your family are eligible to collect workers' compensation benefits under FECA. You and your family may not file a personal injury or wrongful death suit against the United States or its employees. However, you may have cause of action against potentially liable third parties.
- You or your qualifying family member must normally also choose between FECA disability or death benefits, and those payable under your retirement system (either the Civil Service Retirement System or the Federal Employees Retirement System). You may choose the benefit that is more favorable to you.

If you are a private citizen not employed by the Federal Government:

- Even if you are not regularly employed by the Federal Government, if you are rendering personal service to the Federal Government on a voluntary basis or for nominal pay, you may be defined as a Federal employee for purposes of FECA. If that is the case, you and your family are eligible to receive workers' compensation benefits under FECA, but may not collect in a personal injury or wrongful death lawsuit against the United States or its employees. You and your family may file suit against potentially liable third parties. Before you depart, you may wish to consult with the department or agency sponsoring the flight to clarify whether you are considered a Federal employee.
 - If there is a determination that you are not a Federal employee, you and your family will not be eligible to receive workman's compensation benefits under FECA. If you are traveling for business purposes, you may be eligible for workman's compensation benefits under state law. If the accident occurs within the United States, or its territories, its airspace, or over the high seas, you and your family may claim against the United States under the Federal Tort Claims Act or Suits in Admiralty Act. If you are killed aboard a military aircraft, your family may be eligible to receive compensation under the Military Claims Act, or if you are an inhabitant of a foreign country, under the Foreign Claims Act.
-

A

Above Ground Level (AGL) 4-18, 4-28
 4-29, 4-30, 4-34, 4-41, E-1
 Above Water Level (AWL) 4-28, 4-34
 Abstract of Operations 2-3, 9-6, 9-9
 Adequate Crew Rest Facilities 3-17, 3-18
 Aerial Deliveries 4-16, B-14
 Aerial Port of Debarkation (APOD) 6-11, 6-12
 Aerial Port of Embarkation (APOE) 6-11, 6-12
 Aeronautical Information Manual
 (AIM) 3-6, 3-7, 4-12, 4-18
 AFMAN 24-204 4-5, 4-44, 4-46, 5-18, B-16
 Aids to Navigation (ATON) 7-8, 8-10
 Air Defense Identification Zone
 (ADIZ) 2-13, 4-9, 4-22
 Air Delivery Survival Kit (ADSK) 7-8
 Air Intercept 3-11, 8-31, 8-32, 8-42
 8-48, 8-50, 8-54, B-18, B-19, H-2
 Air Mission Commander (AMC) 1-5, 2-10
 Air Shows 4-38, 4-39, 4-40
 Air Station Washington 1-4, 4-42, 8-20, 8-21
 Air Traffic Control (ATC) 1-21, 4-17, 8-52, A-8
 Airborne Use of Force
 (AUF) 1-5, 3-11, 4-47
 8-28, 8-48, 8-49, 8-55, A-17
 Aircraft
 H-60 3-12, B-10
 H-65 3-12, B-11
 HC-130 3-13, B-14
 HU-25 3-13, B-17
 Aircraft Approach Categories 4-12
 Aircraft Characteristics 1-19, B-1, B-6
 Aircraft Commander (AC) 1-15, 2-8, 2-10, 3-9
 3-10, 3-14, 3-23, 4-10, 4-11, 4-29, 4-30, 4-34
 7-5, 8-2, 8-6, 8-9, 8-10, 8-18, 8-19, 8-22, E-1, H2
 Aircraft Separation 4-10
 Aircraft Transfer 4-32
 Aircrew Dry Coverall (ADC) 7-3, 7-4, 8-43, 8-44
 Aircrew Instructor (AI) 8-16, 8-17
 Aircrew Insignia 8-3, 8-4
 Airspace Restrictions 1-20
 Alcohol 3-19, 8-43, D-6
 Alert Duty 3-18, D-1
 Alternates 3-23
 Annoyance to Persons and Endangering
 Property 4-41
 Annual Proficiency Checks 1-15, 8-38
 Anti-Exposure Garments 7-3
 Authority to Approve, Direct and
 Initiate Flights 2-5
 Automatic Direction Finder (ADF) 8-23, 8-53
 B-7, B-8, B-11, B-12, B-18, B-22, I-1
 Automatic External Defibrillators (AED) 4-48

Autorotations 4-21, 8-19, 8-22, H-4
 Aviation Career Incentive Pay
 (ACIP) 9-5, A-4, A-14
 Aviation Electronics Technician (AET) 8-5, 8-11
 Aviation Gunner (AG) 1-16, 3-14, 4-45
 8-6, 8-13, 8-21, 8-28, 8-29, 8-30, 8-39
 Aviation Gunner Instructor
 (AGI) 8-14, 8-17, 8-28, 8-29
 Aviation Life Support Systems Manual
 (ALSSM) 4-21, 7-1, 7-2
 Aviation Logistics Management
 Information System
 (ALMIS) 4-40, 5-12, 8-2, 8-3, 9-2, 9-7, 9-11
 Aviation Maintenance Management Information
 System (AMMIS) 8-3, 8-47, 9-2, 9-7
 Aviation Maintenance Technician (AMT) 8-5, 8-11
 Aviation Mission Specialist (AMS) 1-16, 8-6, 8-15
 Aviation Repair and Supply Center
 (ARSC) 1-4, 2-6, 2-7, 4-4, 4-48, 8-18, 9-2
 Aviation Safety Privilege 1-13
 Aviation Safety Program 1-10, 1-11, 1-12, F-2
 Aviation Survival Technician (AST) 8-5, 8-11
 Aviation Technical Training Center
 (ATTC) 8-12, 8-47
 Aviation Training Center Mobile
 (ATC) 1-4, 4-27, 4-47, 8-7, 8-8, 8-11, 8-14
 8-17, 8-18, 8-47, 8-58, 8-60, A-23
 Aviator in Tactical Command 2-9
 Avionicsman (AVI) 1-16, 8-6, 8-11, B-17

B

Basic Aircrew (BA) 1-16, 8-6, 8-12, 8-40
 Basic Vertical Insertion
 (BVI) 3-11, 4-20, 8-32, 8-50, 8-56
 Boarding Team Members 4-20
 Bone Marrow Donation 3-20

C

Cadet Aviation Training Program (CATP) 4-34
 Cadets 4-35, 4-37, 6-10
 CASPER B-4, B-5, B-15, D-2
 CATP 4-34
 Cellular Telephones 4-48, B-20, B-21
 CG-4377 3-5, 9-3, 9-5, 9-7, 9-8
 Change to Pilot Designation 9-13
 Checklists 4-2, A-20
 Children 4-7
 Civil Air Patrol 4-46
 Clearance 1-4, 2-11, 2-13, 3-7, 3-21
 Closing Out Flight Plans 3-8
 Coast Guard Aircraft Characteristics 1-19, B-6

Index

Coast Guard Auxiliary 1-12, 2-13
..... 4-35, 5-6, A-9, I-1, I-2, I-3
Coast Guard Aviator Evaluation Board 8-59
Coast Guard Civilian Employees 4-36
Coast Guard Human Resource Management
System (CGHRMS) 9-13
Coast Guard Institute 8-2, 8-12, 8-61
Cockpit Strategic Napping 4-42
Combat Rubber Raiding Craft (CRRC) 4-16
Command and Control 1-4
Command Center 1-18, 9-15, 9-18, A-9
Commandant's Aviation Safety Board (CASB) F-1
Competent Medical Authority 5-6, 5-11
Computerized Approach to Coupled Hover
(CATCH) 4-21, 8-22
Conduct of Flights 1-8
Congressional Members 4-36
Congressional Transportation 5-15
Contractor Engineering and Technical
Services (CETS) 5-6
Controlled Flight into Terrain (CFIT) F-2
Copilot (CP) 1-15, 4-30, 8-6, 8-7, H-2, H-4
Cosmetic Damage 2-12
Cost Comparison 5-8, 5-18, C-24
Cover Requirement 4-21
Crew Mission Time 3-16, 3-17
Crew Resource Management (CRM) 8-15, 8-46
Crew Utilization 1-19, 3-15, D-4
Critical Engine 3-4
Critical Incident Stress Management (CISM) F-3
Customs and Immigration 4-41

D

Datum Marker Buoys (DMB) B-14
DD Form 175 3-5, 3-6
DD Form 1801 3-5
Deadheading 3-17, 3-18
Decision Height (DH) 4-12
Declaring an Emergency 4-15
Defibrillators ... see Automatic External Defibrillators
Delay of Missions 2-12
Department of Defense
(DOD) 1-12, 1-22, 2-2, 2-11, 4-16, 4-38, 6-2
Department of Homeland Security
(DHS) 1-5, 1-7, 2-11, 4-36, C-1
Designation see specific individual listings
Destination Requirements 3-22
DHS Management Directive 1-7, 2-2, 5-5, C-1
Direct Commission Aviation (DCA) 4-35
Direction Finder (DF) B-2
Disturbance of Wildlife 4-41
Divers 4-20
DOD 4515.13R 6-6
Donating Blood 3-20

Dropmaster (DM) 1-16, 8-6, 8-11, 8-26
Due Regard 4-10
Duties and Responsibilities of
Standardization Units 8-60
Duty Involving Flying-Denied
(DIFDEN) 8-55, H-1
Duty Involving Flying-Operations
(DIFOPS) 8-43, 8-45, 8-55
Duty Involving Flying-Proficiency
(DIFPRO) 8-1, 8-27, 8-30, 8-32, 8-47, H-1

E

Egress 8-7, 8-15, 8-21, 8-34, 8-35, 8-44, 8-45, G-1
Electromagnetic Interference (EMI)/
Electromagnetic Compatibility (EMC) 4-48
Electronic Aircraft Logbook (EAL) 9-2, 9-7, H-1
Emergency Locator Transmitter (ELT) B-2
Emergency Position Indicating Radio Beacon
(EPIRB) B-2
Emergency Recovery Device (ERD) 7-8
Employment Hours 9-6
Escort 4-26
Examinations 8-2

F

FAA Exemption Form 5231H 4-9, E-1
FAA Form 7233-1 3-5, 3-6, 3-7
Federal Aviation Administration (FAA) 1-8, 4-40
Federal Aviation Regulations (FAR) 3-7, 4-9
Ferry Flights 3-9, 3-10, 4-32
Firearms see Weapons
First Pilot (FP) 1-15, 3-9, 8-6, 8-8, 8-22, 8-54
Fixed Wing (F/W) 1-19, 3-10, 3-25, 8-34, B-1
Flight Boots 7-2
Flight Demonstrations 4-39
Flight Engineer 1-16, 8-6, 8-11
Flight Examiner (FE) 1-16, 8-6, 8-15, 8-54
Flight Examining Board (FEB) 8-2, 8-38
Flight Gloves 7-2
Flight Helmet 7-3
Flight Information Publication (FLIP) 4-9
Flight Maneuvers 4-16
Flight Mechanic (FM) 1-16, 8-6, 8-11, 8-21, 8-27
Flight Pay 9-4
Flight Plans 3-5, 3-6, 3-8, 3-21
Flight Profile 1-19
Flight Restrictions 3-20, F-2
Flight Rules 4-9, 4-12, 4-13
Flight Safety Officer (FSO) 8-2
Flight Schedule 2-5, 9-7, A-7
Flight Scheduling Standards 3-15, 3-16
Flight Services Officer 9-10, A-8

Flight Standards Board (FSB) 8-2
 Flight Suit 7-2, 8-43
 Flight Surgeon (FS) 8-6, 8-15, 8-26, A-6
 Flight Test Programs 2-6
 Flight Time 3-16, 8-19, 9-3, 9-11
 Flight Violations 4-22, H-5
 Flotation Equipment 7-5
 Fly-overs 4-39
 Foreign Military 5-6
 Foreign Nationals 4-35, 5-10
 Form 7233-4 3-5
 Formation Flight 4-17
 Forward Looking Infrared (FLIR) B-4, B-5
 Fuel Availability 3-2
 Fuel Reserves 1-21, 3-7
 Full Coach Fare 5-14
 Fur and Poultry Farms 4-41

G

General Planning (GP) 4-9, 8-52
 Global Positioning System (GPS) 4-13
 Ground Operations 4-4
 Ground Safety Officer (GSO) A-5
 Grounding 1-13, F-2
 Guards 5-6
 Guns see Weapons

H

Handguns see Weapons
 Hazardous Duty Incentive Pay
 (HDIP) 9-5, A-4
 Hazardous Materials 4-44, 5-18
 Helicopter Circling Approach Minimums 4-12
 Helicopter In-flight Refueling
 (HIFR) 3-3, 4-19, B-1
 High Frequency Radio Waves
 (HF) B-11, B-12, B-15, B-18
 Helicopter Interdiction Squadron
 (HIITRON) 8-13, 8-60
 Hoisting 4-8, 4-19, 4-20, 4-21, 7-7, B-9
 Hot Refueling 3-3, 4-5
 Human Factors 1-10
 Hunting 4-41
 Hyperbaric Exposure 3-20
 Hypobaric Exposure 3-20

I

Icing 3-25
 Identification Friend or Foe (IFF) 4-9, 4-14
 Instructor Pilot (IP) 1-15, 8-6, 8-15
 Instrument Flight Rules (IFR) 3-7, 3-21, 4-12

Instrument Landing System (ILS) 8-43, I-1
 Instrument Meteorological Conditions
 (IMC) 3-5, 3-9, 3-10, 3-21, 4-11, 4-17
 Instrument Approach Procedures 4-12
 Intercommunication System (ICS) 4-2, 4-4
 International Civil Aviation Organization
 (ICAO) 1-8, 1-21, 3-5, 4-9
 International Ice Patrol B-3, B-15
 Inverse Synthetic Aperture Radar
 (ISAR) B-2, B-15, B-20

L

Land Survival Training 8-8, 8-21, 8-46
 Lapse and Redesignation 8-54
 Law Enforcement (LE) 1-8, 3-5, 4-9, I-3
 Life Vest 7-5, 8-43
 Lights Out 4-10, E-1
 Loadmaster (LM) 4-5, 8-6, 8-11, 8-26
 Logbook 8-3, 8-35, 9-11, 9-12, H-1
 Loss of Useful Consciousness 4-23, 4-26
 Low Pressure Chamber
 (LPC) 3-20, 8-7, 8-21, 8-35, 8-43

M

Maintenance Flights 3-9, 3-10, 4-29
 Major Malfunctions 2-12
 Management Practices A-20
 Manual Approach to Controlled Hover
 (MATCH) 4-21, 8-22
 Marine Environmental Protection (MEP) 1-2, A-9
 Marine Safety Officer (MSO) I-3, I-4
 Maritime Law Enforcement Manual
 (MLEM) 4-18, 4-20, 4-44, 4-47, 9-16
 Master-At-Arms (MAA) A-4, A-16, A-18
 Mean Sea Level (MSL) 7-6, E-1
 Media 4-35, 5-10
 Medical Evacuation (MEDEVAC) 5-6, 5-11, B-9
 Medication 3-19, D-7
 Minimum Descent Altitude (MDA) 4-12
 Minimum En route Altitude (MEA) 3-23
 Minimum Equipment Lists 4-3
 Minimum Pilot Assignment 3-9, 3-10
 Minimum Rescue/Survival Equipment 7-8
 Minor Malfunction 2-12
 Mishap 1-11, 4-6, 9-12, 9-14, F-1
 Mission Prioritization 1-18
 Mission Requests 1-17
 Motorcycles 5-17

N

National Science Foundation (NSF) 4-36, 5-10

Index

National Transportation Safety Board
(NTSB) 1-12, 9-15
Navigator 1-16, 8-6, 8-11
Night Adaptation 8-43, D-3
Night Vision Goggles
(NVG)..... 4-27, 4-34, 8-39, 4-49, 8-55, 8-56, B-4
North American Aerospace Defense
Command (NORAD)..... 2-11
Not Mission Capable - Maintenance (NMCM) .. A-12
Not Mission Capable - Supply (NMCS)..... A-12
Not Mission Capable - Depot Level
Maintenance (NMCD) A-12

O

Officer Candidate School (OCS) 4-35
Offshore Flight Operations 4-23
Operating the Controls..... 4-2, 4-34
Operational Control (OPCON)..... 1-5, 1-20, 4-15
Operational Hazard Training 8-46
Operational Orientation Flights 4-34
Orientation Flights..... 4-33, 4-34, 4-37
Other Periodic Training 8-43
Other Transportation for Official Business 2-3
Overseas 6-3, 6-6, 6-15
Oxygen 7-6, 8-38

P

Parachute Jumps 4-16, 4-17
Participation of Aircraft in Flight and
Static Displays 4-38
Passenger Briefing 4-7
Passenger Manifest Requirements 3-8
Passengers..... 1-7, 4-7, 4-19, 5-8, 5-9, 6-2, 6-4, 9-9
Permanent Change of Station (PCS).....5-14, 6-7, 8-15
Permanent Duty Station (PDS)..... 6-5, 6-12
Personal Electronic Device (PED)..... 4-48
Personnel Authorized to Command Coast
Guard Aircraft..... 2-i, 2-1, 2-8, 2-9, 2-10
Personnel Authorized to Pilot Coast
Guard Aircraft..... 2-8
Pets 4-41, 6-15
Pilot 1-8, 1-13, 1-15, 2-8, 3-9, 4-2
..... 4-27, 8-6, 8-21, 8-41, 8-51, 9-3, H-2
Pilot in Command (PIC)..... 1-4, 2-8, 3-5, 4-2
Pilot Under Instruction (PUI) 8-6
Position Reports..... 4-9
Post-Mission Reports..... 1-22
Practice Autorotations 4-21
Precautionary Landing..... 2-12
Precision Approach Radar (PAR)..... 8-53
Precision Approach to a Coupled Hover
(PATCH)..... 4-21, 8-22

Prisoners 5-5, 5-6
Privately Owned Vehicle (POV) 5-18
Program Hours..... 1-2, 1-17
Protective Clothing 7-2

Q

Qualifications 8-1, 8-2, 8-48, 9-13, 9-16, H-2

R

Radar 4-10, B-2, I-1
Range B-6, B-13, B-17, B-19, B-20
Readiness 1-20
Recommended Management Practices A-20
Recovery and Salvage F-3
Recovery Time 4-25
Reduced Engine Operations 4-18
Reimbursable Use 2-4
Requests for Grounding 1-13
Requests for Transportation..... 5-4, 5-15
Required Use Transportation 2-3, 5-3, 5-7, C-24
Requirements for Designation 8-7, 8-18
Rescue Swimmer
(RS)..... 1-16, 4-36, 8-6, 8-12, 8-40, B-9, H-8
Resorts 4-41
Rest Requirements 3-4, 3-16, 3-17, 4-42
Restricted Orientation Flights..... 4-37
Reverse Cycle Operations (RCO) 3-17, D-2
Risk Management 1-8, 1-11, 3-4
Rotor Blade Damage 4-20
Rotary Wing (R/W) .. 3-25, 4-20, 7-5, 8-32, 8-50, B-9

S

Safety Devices 7-7
Safety of Flight Test (SOFT)..... 4-48
Safety Restraint 7-7
Salvage F-1, F-3
Science Community Members..... 4-36
Search and Rescue
(SAR)..... 1-8, 3-18, 8-38, 8-54, A-20, I-3
Search and Rescue Fundamentals
Correspondence Course (SARFND)..... 8-9
Seat Belts 4-8
Security of Aircraft..... 4-6
Semiannual Training Requirements..... 8-26
Senior Duty Officer (SDO)..... A-18
Senior Federal Officials (SFO).... 5-5, 5-8, 5-15, 5-16
Sensor Systems Operator (SSO)..... 1-16, 8-6, 8-11
Shallow Water Egress Training
(SWET)..... 8-21, 8-34, 8-44, 8-45
Side Looking Airborne Radar
(SLAR) B-3

Simulated Instrument Conditions 4-14
 Simulator
 4-27, 8-19, 8-22, 8-34, 8-45, 8-58, D-8, H-1
 Single-Engine 4-21
 Smoking..... 4-42, D-7
 Space Available Transportation...5-11, 5-14, 6-1, 7-7
 Special Duty Assignment Pay (SDAP)..... A-4, A-14
 Special Mission Equipment 4-16
 Special Qualification Requirements 8-48
 Standard Organization A-3
 Static Displays 4-38, 4-40
 Strip Alert 3-18
 Structural Damage 2-12
 Survival Suit 7-3
 Survival Time 4-25
 Swim Test..... 8-7, 8-15, 8-21, 8-43, G-1

T

Tactical Aid to Navigation
 (TACAN)..... B-11, B-12, B-14, B-18, B-21, B-22
 Tactical System Operator
 (TSO)..... 1-16, 8-6, 8-26, B-15
 Tactical Vertical Insertion (TVI)
 3-5, 3-11, 4-20, 8-21, 8-33, 8-39, 8-49, 8-56
 Takeoff Minimums 3-21, 3-23
 Taxiing..... 4-4
 Temporary Additional Duty
 (TAD)6-5, 6-8, 8-37
 Temporary Duty (TDY)..... 6-5, 6-8
 Thunderstorms 3-25
 Training Records8-3, 8-35, 9-16, A-7
 Training Requirements ... 8-18, 8-20, 8-34, 8-36, 8-56
 Training Hour Targets 1-16
 Transfer of Pilot in Command 2-9
 Transponder..... 4-9, 4-14
 Transportation of Cargo..... 5-17, C-25
 Transportation of Spouse.....5-13, 5-18, 5-19
 Turbulence 3-25

U

Ultra High Frequency (UHF).....B-2
 Unescorted Operations 4-26
 Uniformed Services 4-8, 4-35, 5-6, 6-3, 6-7
 Uniforms 4-8
 Unsatisfactory Report of Aeronautical
 Material (UR)..... A-10, A-13
 Unusual Performance 4-3

V

Vertical Insertion (VI) 1-5, 4-20

Vertical Replenishment (VERTREP)..... 3-21, 4-19
 Very High Frequency Omnidirectional
 Range Station (VOR)
 B-11, B-12, B-14, B-18, B-20, B-21, I-1
 Very Important Person (VIP).....4-7, 4-37, I-i, I-8
 Visual Acuity D-9
 Visual Meteorological Conditions
 (VMC)..... 3-5, 3-9, 3-10, 4-10
 Voice Flight Data Recorder
 (VFDR).....4-50, 9-15, F-1
 Volcanic Ash Precautions..... 4-42

W

Warm-up Flight 8-35, 8-40
 Watch Organization and Duties A-18
 Water Survival Training 8-7, 8-43
 Weapons 4-44, 4-45, 4-46, 8-13, A-17
 Weight and Balance..... 3-8
 Wildlife..... 4-41

Z

ZULU Time 9-3, 9-8

This Page Intentionally Left Blank